INDIAN TARIFF BOARD

Written Evidence

recorded during enquiry on the

SUGAR INDUSTRY

Volume I

Indian Sugar Mills Association
and
Individual Mills in the United Provinces

सत्यमेव जयते

DELHI: MANAGER OF PUBLICATIONS
1938

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Personnel of the Board

President .	Sir Geoffrey Bracken, K.C.I.E., C.S.I., I.C.S.
Members .	Mr. Fazal Ibrahim Rahimtoola. Dr. L. C. Jain.
Secretaries .	Mr. K. B. Bhatia, I.C.S., up to 5th December, 1937 Rai Sahib H. C. Sen from 6th December, 1937.

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GOVERNMENT OF INDIA.

DEPARTMENT OF COMMERCE.

RESOLUTION.

TARIFFS.

New Delhi, the 27th March, 1937.

No. 127-T. (1)/37.—The amount of protection afforded to the Sugar Industry by the duties imposed by section 2 of the Sugar Industry Protection Act, 1932, will determine on the 31st March, 1938, and section 3 of that Act provides that the Governor General in Council shall cause to be made by such persons as he may appoint in this behalf an enquiry to ascertain if the protection of the Sugar Industry during the period from 31st March, 1938, to the 31st March, 1946, should be continued to the same extent or to a greater or lesser extent. The Government of India have decided that this enquiry should be undertaken by the Tariff Board and the following terms of reference have been framed for its guidance:—

(*a*) The Board is requested to examine the measure of protection now enjoyed by the Sugar Industry and to report whether it is necessary to continue protection to this extent or to a greater or lesser extent;

(*b*) In making its recommendations the Tariff Board will take all relevant considerations into account including that stated in part (*b*) of the Resolution adopted by the Legislative Assembly on the 16th February, 1923.

2. Firms and persons interested in the Sugar Industry or industries dependent on the use of sugar who desire that their views should be considered by the Tariff Board should address their representations to the Secretary of the Board.

Press Communiqué issued by the Tariff Board on the 5th April, 1937.

In the Government of India, Department of Commerce, Resolution No. 127-T. (1)/37, dated the 27th March, 1937, the Tariff Board has been directed to hold an enquiry to ascertain if the protection afforded to the Sugar industry by the duties imposed by section 2 of the Sugar Industry Protection Act, 1932, should be continued to the same extent or to a greater or lesser extent during the period from the 31st March, 1938, to the 31st March, 1946. Those Associations, firms or persons interested in the Sugar industry or industries dependent upon sugar who desire that their views should be considered by the Board are requested to forward their representations (with six spare copies) to the Secretary to the Board so as to reach its office at No. 1, Council House Street, Calcutta, not later than the 1st May, 1937.

List of Vacuum Pan Sugar Mills in India in existence during the season 1936-37.

* Mills marked thus are members of the Association.

† Indicates factories which did not work during the year.

‡ Indicates mills with refineries.

No.	Factory.	Process.	Year of starting.	Original crushing capacity.	Present crushing capacity (As reported in September, 1937).	Remarks.
	Bengal.					
1*	North Bengal Sugar Mills, Co., Ltd.	DS‡	Dec. 1933	500	1,000	
2*	Setabganj Sugar Mills, Ltd.	DS‡	Dec. 1933	400	500/550	
3*	Shree Radha Krishna Sugar Mills, Ltd.	DS	1933	400	600	
4	Deshabandhu Sugar Mills, Ltd.	DS	1934-35	150	250	
5	East Bengal Sugar Mills Ltd.	..	1935	100/130	150	
6	Shikarpur Sugar Mills .	..	1935	75	100	
7	Rajlakshmi Sugar Mills .	S	1935	100	100	
	Bihar.					
1*	Sakri Sugar Works .	S	1933-34	700	700	
2*	Lohat Sugar Factory .	S	1912	400	1,300	
3*	Ryam Sugar Co., Ltd. .	C	1914-15	350	750	
4*	Samastipur Central Sugar Co., Ltd.	S	1920	Unknown	750	
5*	New India Sugar Mills, Ltd.	DS	1934-35	300	800	

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No.	Factory.	Process.	Year of starting.	Original crushing capacity.	Present crushing capacity (As reported in September, 1937).	Remarks.
	Bihar—contd.					
6*	Semapur Sugar Works .	C	1933-34	500	500	
7*	Japaha Sugar Factory .	S	1906	250	450/500	
8*	Motipur Sugar Factory, Ltd.	DC	1933-34	900/1,200	900/1,200	
9*	Belsund Sugar Co., Ltd..	DS	1933-34	450	875	
10*	Barrah Sugar Factory .	C	1907	..	900/1,000	
11*	Shree Hanuman Sugar Mills, Ltd.	DS‡	1932-33	400	600	
12*	Sagauli Sugar Works, Ltd.	DS	..	..	..	
13*	Motilal Padamat Sugar Mills, Ltd.	S	1932-33	450	1,000	
14*	Chanpatia Sugar Factory	S	1932	650	850	
15*	Pursa Sugar Factory	S	1907	400	500/600	
16*	New Swadeshi Sugar Mills, Ltd.	S	1932-33	400	800	
17*	Harinagar Sugar Mills, Ltd.	DS	1933-34	600	1,200/1,300	
18*	Gaya Sugar Mills, Ltd. .	DS‡	Jan. 1934	250	600	
19*	South Behar Sugar Mills, Ltd.	S	1933-34	1,000	1,200/1,400	
20*	Dumraon Raj Sugar Factory.	DS	1933-34	250	400	
21*	Rohas Industries, Ltd. .	DC	1933	1,000/1,200	1,800	
22*	Ganga Deshi Sugar Factory, Ltd.	..	1924	60	100	
23*	Sitalpore Sugar Works, Ltd.	DS	1933-34	450/600	2,000	
24*	Marhowrah Sugar Factory.	DC	1904	300	950	
25†	Maharajganj Sugar Factory.	..	..	..	..	Did not work this year.
26*	Behar Sugar Works .	DC	..	..	1,000	
27*	New Savan Sugar and *Gur* Refining Co., Ltd.	S	1919	170	800	
28*	Indian Sugar Works .	S	1934	400	400	
29	Siwan Deshi Sugar Factory.	R	..	..	..	
30*	Bharat Sugar Mills, Ltd.	S	1932	300	300	
31*	Sasa Musa Sugar Works, Ltd.	S	1932	450	600	
32*	The Vishnu Sugar Mills, Ltd.	S	1932-33	450	800	
33*	S. K. G. Sugar Mills, Ltd.	S	1933-34	850	1,400	
34	Shri Lakshminarayan Sugar Works, Ltd.	..	1934	75	75	
35*	Ganga Devi Sugar Mills, Ltd.	..	1936	450	450	

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No.	Factory.	Process.	Year of starting.	Original crushing capacity.	Present crushing capacity (As reported in September, 1937).	Remarks.
	United Provinces.					
1*	Purtabpore Co., Ltd. .	DC	1904	Unknown	800	
2*	Noori Sugar Works .	S	1924	500	500	
3*	Shree Sitaram Sugar Co., Ltd.	S	1934	500/650	600	
4*	Cawnpore Sugar Works, Ltd., (Gauri Factory).	DS	1916	111	700	
5	Deoria Sugar Mills, Ltd.	S	..	..	500/700	
6	Mahaswastika Sugar and Industrial Corporation, Ltd.	DS	1932-33	100	200	
7*	Saraya Sugar Factory .	DS	1909	800 (from 1920)	2,250	
8*	Diamond Sugar Mills, Ltd.	DS	..	400	600	
9*	Pipraich Sugar, Ltd. .	S	1932-33	150	800	
10*	Shanker Sugar Mills, Ltd.	S	Jan. 1934	600	900	
11*	Punjab Sugar Mills, Co., Ltd.	S‡	1926	400	600	
12*	Mahabir Sugar Mills, Ltd.	DS	1932	400	500	
13*	Vishnu Pratap Sugar Works, Ltd.	S	1933-34	400	400	
14*	Lakshmi Devi Sugar Mills, Ltd.	DS	1933-34	400	400/600	
15*	Ishwari Khetan Sugar Mills, Ltd.	S‡	..	350	500	
16*	Ramkola Sugar Mills, Co., Ltd.	DS	1932-33	400	700/800	
17*	Maheswari Khetan Sugar Mills, Ltd.	DS	..	..	..	
18*	Padrauna Raj Krishna Sugar Works, Ltd.	S	1924	300	800	
19*	Jagdish Sugar Mills, Ltd.	S	1933	400	400	
20*	United Provinces Sugar Co., Ltd.	DS	1913-14	850	925	
21*	Ganesh Sugar Mills, Ltd.	DS	1932-33	350	600	
22	Ledi Sugar Factory .	S	..	..	80	
23*	Campierganj Sugar Mills, Ltd.	S	..	150	300	
4*	M. K. M. G. Sugar Mills, Ltd.	S	1932-33	400	500/600	
25*	Basti Sugar Factory .	S	1928-29	400	700/800	
26*	Walterganj Sugar Factory.	S	1932-33	400	700/800	
27	Popular Sugar Co., Ltd..	DS	1933	600/800	800/1,000	
28	Lakarmandi Sugar Mills, Co., Ltd.	DS	1935	150	150	

No.	Factory.	Process.	Year of starting.	Original crushing capacity.	Present crushing capacity (As reported in September, 1937).	Remarks.
	United Provinces—contd.					
29*	Seksaria Sugar Mills, Ltd.	DS	1932-33	400	600	
30*	Nawabganj Sugar Mills, Co., Ltd.	DS	1932	400	1,800	
31*	Balrampur Sugar Co., Ltd.	S	1933	700	750	
32*	Gulzarimal Ramchand Sugar Mills.	S	1932	400	600	
33*	Burhwal Sugar Mills, Ltd.	‡	1932-33	150	300	
34	Lucknow Sugar Works .	..	..	..	..	
35*	Ratna Sugar Mills, Co., Ltd.	DS	1933	500	500	
36*	Shree Krishna Desni Sugar Works.	S‡	..	..	400	
37*†	Tribeni Deshi Sugar Works.	S	..	..	..	Did not work during the year.
38*	Lakshmi Sugar and Oil Mills, Ltd.	DS	1935-36	1,200	1,200	
39*	U. P. Co-operative Sugar Factory, Ltd.	DS	..	..	900	
40*	Oudh Sugar Mills, Ltd. .	DS	1933-34	700	1,600	
41*	Lakshmiji Sugar Mills, Co., Ltd.	S	1932-33	350	1,000	
42	Aira Sugar Factory .	S	..	..	..	
43*	Hindustan Sugar Mills, Ltd.	DS	Nov. 1932	400	1,600	
44*	Rosa Sugar Works and Distilleries.	S‡	1839	300	650	
45*	H. R. Sugar Factory, Ltd.	S	1932-33	500/750	750	
46	Khandke Sugar Mills, Ltd.	..	1933	125/150	800	
47*	Kesar Sugar Works, Ltd.	DS	..	..	1,000	
48*	L. H. Sugar Factories and Oil Mills, Ltd.	S	1929	..	150	
49*		S	..	..	800	
50*		S	..	450	800	
51*	Raza Sugar Co., Ltd. .	DS	1933-34	500	950	
52*	Buland Sugar Co., Ltd. .	DC	1935-36	500	1,000	
53*	Upper Ganges Sugar Mills, Ltd.	..	..	..	1,100	
54*	Seth Shiv Prasad Banarsidas S. Mills.	..	1933-34	..	400	
55	Ganga Sugar Works .	‡	1934-35	100	100	
56*	Dhampur Sugar Mills, Ltd.	..	1933-34	450	600	

No.	Factory.	Process.	Year of starting.	Original crushing capacity.	Present crushing capacity (As reported in September, 1937).	Remarks.
	United Provinces—concld.					
57†	Bhogpur Sugar Factory	..	..	..	..	Did not work this year.
58*	Jailakshmi Sugar Co., Ltd.	DS‡	1929	50	350	
59	Jwalapur Sugar Factory	..	Nov. 1937	..	100	
60*	Ganga Sugar Corporation, Ltd.	DC	..	400	..	
61*	Upper Jumna Swadeshi Sugar Mills Co., Ltd.	DS	1932-33	400	800	
62*	Upper India Sugar Mills, Ltd.	DS	1933	500/600	1,000	
63*	Amritsar Sugar Mills Co., Ltd.	DS‡	1934	800	1,000	
64*	Upper Doab Sugar Mills, Ltd.	DS	1933	600/800	800/1,000	
65*	Diwan Sugar Mills	DS‡	1934	300	450	
66*	Daurala Sugar Works	..	Nov. 1932	500	800	
67*	R. B. Narain Singh Sugar Mills, Ltd.	..	1933-34	1,000	1,000	
68*	Jaswant Sugar Mills	‡	1933-34	under 300	300	
69*	Ramlaxman Sugar Mills	..	1935-36	400	780	
70*	Modi Sugar Mills, Ltd.	DS‡	1933	450	500	
71*	Simbhaoli Sugar Mills, Ltd.	DS	1933-34	..	400	
72†	Muradnagar Sugar Works.	DS	..	..	60	
73	Prag Sugar Works	DS	..	..	..	Did not work this year.
74*	Neoli Sugar Factory	DS	1933	450/600	800/950	
75*	Tulsipur Factory of Balrampur Sugar Factory.	S	1936	800	800	
76*	Srikrishnadas Sugar Mills and Distilleries.	R	..	..	..	
77	Baijnath Balmukund Sugar Mills.	R‡	750 mds., 1910	..	..	
78*	Kamlapat Motilal Gutaiya Sugar Mills.	R‡	..	..	..	
79*	Cawnpore Sugar Factory R.	‡	1910	3,000 mds. gur.	..	
80	H. B. Institute Experimental Sugar Factory.	..	1932-33	24	24	
	Punjab.					
1*	Sonepat Sugar Factory	..	1929	250	400	Shifted to Amroha (E. I. R.).
2	Jagatjit Sugar Mills Co., Ltd.	DC	1933	400/500	600	

No.	Factory.	Process.	Year of starting.	Original crushing capacity.	Present crushing capacity (As reported in September, 1937).	Remarks.
	Punjab—contd.					
3†	Phulerwan Sugar and Oil Mills, Ltd.	..	..	..	..	Last worked in 1934-35, in liquidation.
4	Gujranwala Sugar Mills Co., Ltd.	DS	1933-34	300	300	
5†	Bhalwal Sugar Mills Co., Ltd.	..	..	..	..	Not working.
6	Ameritsar Sugar Mills Co., Ltd.	R‡	..	..	..	
7†	Lakshmi Sugar and Oil Mills, Ltd.	R‡	..	..	..	Last worked on 30th April 1945.
8	Shree Guru Arjundev Sugar Mills.	DS	..	..	..	Not working.
9*	Saraswati Sugar Mills .	DC	1934	450	450	
10†	Punjab National Sugar Mills.	..	..	..	..	Worked only 15 days in the year.
	Madras.					
1	Aska Sugar Works and Distilleries.	..	..	..	..	
2	Vizagapatam Sugar and Refinery, Ltd.	DS	1934	50	125	
3	Etikoppaka Sugar Factory.	DS	1934	50	75	
4	Sri Rama Sugar Mills, Ltd.	DS	1934-35	150	150	
5	Vuyyuru Co-operative and Industrial Credit Society.	DS	Jan. 1936	850	850	
6*	Deccan Sugar and Abkari Co., Ltd.	RC‡	1900	..	..	
7*	East India Distilleries and Sugar Factories, Ltd.	C	1932	700	1,000	
8	India Sugars and Refineries, Ltd.	DS	1935	400	500	
9	Coimbatore Lakshmi Sugar Mills, Ltd.	..	..	..	..	
10	Al. Vr. St. Sugar Mills and Distilleries.	R‡	1895	12 tons gur (25 tons jaggery).	..	
11	Lakshmi Sugar Mills .	R‡	..	..	..	
12	Shri Ramkrishna Sugar Mills.	..	1934-35	80	120	
13	The Madras Sugars, Ltd.	..	1937	50/100	50/100	
	Travancore State.					
1	The Travancore Sugars, Ltd.	R	..	..	..	
	Mysore State.					
1*	Mysore Sugar Co., Ltd. .	DS	1934	400	2,000	

No.	Factory.	Process.	Year of starting.	Original crushing capacity.	Present crushing capacity (As reported in September, 1937).	Remarks.
	Bombay.					
1*	Kolhapur Sugar Mills .	DS	1934	400	400	
2	Saswad Mali Sugar Factory, Ltd.	..	1934	200	200	
3	Phaltan Sugar Works .	..	1934	400	500	
4*	Kalamb Sugar Works .	DS	1934	250	550	
5*	Maharashtra Sugar Mills, Ltd.	S	1933-34	150/200	600/750	
6*	Belapur Co., Ltd. . .	S	1924	400	630	
7*	Ravalgaon Sugar Farm, Ltd.	S	1933	150	275	
8	Belvandi Sugar Farm, Ltd.	..	1935-36	200/250	200/250	
	Sind.					
1*	The Pioneer Sind Sugar Mills.	DS	1934-35	300	300	
	Jaora State.					
1	Jaora Sugar Mills . ..	..	..	..	450/600	

Provincial Distribution of Sugar Mills in India, 1936-37.

Province.	Mills working with cane.	Gur Refineries only.	Total of Mills.	Members of the Association.
Bengal	7	..	7	3
Bihar	34	1	35	32
United Provinces . . .	76	4	80	64
Punjab	8	2	10	2
Madras	11	2	13	2
Travancore	..	1	1	..
Mysore	1	..	1	1
Bombay	8	..	8	5
Sind	1	..	1	1
Jaora State	1	..	1	..
Total .	147	10	157	110

No. 1.—General Questionnaire.

NOTE.—1. Reply to this questionnaire, if possible with six spare copies, should reach the Secretary, Tariff Board, Ootacamund, before 25th June, 1937, at the latest.

2. The answers may be confined to matters with which you are directly acquainted and on which you are in a position to supply the Board with detailed evidence.

3. Unless otherwise required, it is requested that figures may be supplied from the working season of 1930-31 (or, if the factory started working after 1930-31, from the first year in which the factory started operation) up to the end of working season 1936-37.

4. Figures may kindly be given per acre or per standard maund (82 $\frac{2}{7}$ lb.) as the case may be.

5. It is suggested that a note may be made of any facts or figures which you will like to be considered as confidential. Such information will not be published. In no case will any indication be given in the Tariff Board Report of the source of information or the name of any individual or factory except with permission.

PRODUCTION OF SUGAR.

Introductory.

1. In what year did your factory begin the manufacture of sugar and what is its full capacity?

2. What has been the output of your factory for each of the last seven years? If different classes of sugar are produced, please state the output of each class separately.

3. Do you consider that your factory is advantageously situated in respect of—

   (a) cane supply, other raw materials such as limestone, etc., and important markets,

   (b) facility of rail, road and other communications, and

   (c) other considerations, such as adequate labour supply?

4. What is the process of manufacture of your factory? What are the respective advantages and disadvantages of sulphitation, carbonitation and other processes?

5. What changes have been made in the lay-out of your factory and what extensions of plant or replacement of machinery have been made since 1930? Please state the amounts spent.

6. What further extensions or replacements are you in contemplation?

7. (a) What are the main factors which determine the size of an economic plant in the sugar industry?

(b) What, in your opinion, is the smallest unit of production which can be operated economically under present-day conditions?

8. To what extent is sugar factory equipment now obtainable in India?

9. Are you satisfied with the technical assistance given by—

   (i) the Imperial Institute of Sugar Technology,

   (ii) the Industries department of your local Government?

Have you any suggestions to offer?

Raw Materials.

10. Do you undertake cultivation of sugarcane? If so, did you purchase your land outright or obtain it on lease? What difficulty, if any, did you experience in purchasing or leasing land?

11. Please give the following information:—

(*a*) total area held,

(*b*) average area under cane each year,

(*c*) varieties of cane grown,

(*d*) system of cultivation with special reference to fallows, rotation and manuring,

(*e*) average yield per acre for different varieties of cane and their sucrose content, and

(*f*) cost of cultivation per acre, in as much detail as possible.

12. What area have you set aside for—

(*a*) experiment in cane cultivation,

(*b*) production of seed for sale or free distribution to cultivators?

13. What experiments have you tried, specially in relation to early and late varieties of cane and manuring? How far has the Agricultural Department of your province been of assistance in this respect?

14. What changes have taken place during the last seven years in—

(*a*) the quantity of cane available,

(*b*) the quality of cane?

15. To what extent is cane liable to damage from frost, disease or insect pest? Can you give an estimate of the percentage of loss through these causes?

16. Is your factory assured of a sufficient supply of suitable cane? What are the principal varieties of cane crushed in your factory? Please state the field yield and sucrose content of each.

17. To what extent and in what circumstances is the supply of cane and the price at which it can be obtained influenced by the competition of other factories?

18. (*a*) Has the area under cultivation from which you ordinarily obtain your supply been subject to considerable variations?

(*b*) If so, to what causes do you attribute such variations and in particular, what is the effect of—

(i) climatic conditions including excess or defect in rainfall,

(ii) prices obtainable for sugar,

(iii) prices obtainable for gur/jaggery,

(iv) prices obtainable for alternative cash crop?

19. The production of sugarcane in 1936-37 is the highest on record. Is it in excess of requirements in your area and do you consider any restrictions necessary?

20. Please supply information, if available, as to the cost of cultivating one acre of sugarcane by an average cultivator and the outturn per acre. The cost should be stated in as much detail as possible.

21. What are the main difficulties of cane-growers in the cultivation of cane and its delivery to the factory and have you any suggestions to make?

22. (*a*) The previous Tariff Board came to the conclusion that compulsory acquisition or leasing of land for cultivation of cane by factories was impracticable in Indian conditions (pages 101 and 102 of the report). What are your views on this subject?

(*b*) Failing compulsory acquisition and leasing, are you in favour of allotting special areas to different factories for their supply of sugarcane? How could a system of "zones" be worked?

23. If a "zone" system were introduced, to what extent would you be prepared to give assistance to cultivators in the form of advances of cash or supply of seed and manure, etc., or the development of feeder roads?

24. Are you in favour of—

(*a*) fixation of a quota for sugar manufacture by factories,

(*b*) licensing of—

(i) new factories,

(ii) extensions of existing factories?

Please state your reasons.

25. As regards your cane supply, what is the proportion of—

(*a*) gate cane,

(*b*) rail cane, and

(*c*) tram-borne cane?

Has the proportion varied from year to year and, if so, for what reasons?

26. Is your gate cane entirely transported by carts or are lorries also used? What is the average weight of cane carried per cart? To what extent is it possible to improve the type of country cart by the substitution of rubber-tyred carts or otherwise? If you have employed any improved type of cart, please state what additional maundage of cane can be carried.

27. Is the mileage of roads in your vicinity adequate? What is the condition of main and feeder roads?

28. From what distance is cane brought by road and what is the average time taken between cutting cane and delivery at factory? During road transport to what extent is cane protected from deterioration?

29. What is the average cost of transport of cane by cart per maund per mile? Do cane-growers employ their own carts or do they have to hire them? If they hire carts, what is the average cost of hiring?

30. Are any tolls or other dues levied on carts supplying your factory?

31. What are your arrangements for the continuous and uniform supply of gate-cane? What is the normal period of detention of a cart at your factory? What improvements in these arrangements have you made in recent years to ensure prompt delivery of cane and speedy release of carts?

32. From what distance is cane transported by rail to your factory? What is the average time taken between cutting of cane and delivery at factory? Are railway arrangements for transport of cane satisfactory?

33. On what basis are railway freights calculated? Have there been any changes in the rates in recent years? Would you prefer the substitution of a maundage rate per mile for a flat rate?

34. Have you any remarks to make on railway freight rates for other raw materials such as limestone or for manures?

35. What mileage of tramways serve your factory? What is the average cost of transport per maund? Is the charge borne by the factory or by the grower?

36. Do you consider a tramway system generally advantageous? Are there any special difficulties in laying out a tramway system?

37. Can you give an estimate of the extent of deterioration of cane owing to delay in delivery by road and rail?

38. What proportion of your cane is purchased—

(*a*) direct from cane-growers, and

(*b*) through contractors or agents?

39. Into what arrangement do you enter with cultivators for the supply of cane? Do you give advances in cash, or provide seed or manure or render any other assistance?

40. If your cane is not purchased direct from growers, what arrangements do you make and what commission do you pay?

41. Is any part of your cane supply obtained from cane-growing or cane-supplying associations and on what terms?

42. What are your arrangements for weighment of cane? Is payment made at the time of delivery of cane: if not, what is the normal interval between delivery of cane and payment?

43. Please state the prices at which you have purchased cane during the last seven years. Do prices tend to vary at different periods of the season?

44. Does the price at which you purchase sugarcane bear any definite relation to the price of sugar? If not, on what system are prices fixed?

45. To what extent and in what circumstances is the supply of cane and the price at which it is obtainable influenced by the price of gur/jaggery or khandsari sugar?

46. Have there been considerable variations in the price of gur/jaggery in the area in which you are principally interested? What are the causes of these variations?

47. If prices are fixed under the rules framed under the Sugarcane Act XV of 1934, have you paid prices in excess of the minimum rate and, if so, to what extent and why?

48. Do you consider the basis on which minimum prices are fixed satisfactory? Have you any suggestions to make?

49. How far do you consider it feasible to introduce a system of "bonus" payments over and above the minimum rates for superior, early and late varieties of cane?

50. What has been the duration of the crushing season for each of the last seven years and what are the reasons for variations? Do you consider the period sufficiently long for economical working?

51. What are the possibilities of extending the crushing season by the introduction of early and late varieties of cane?

52. Are you satisfied with the assistance given by the Imperial Council of Agricultural Research, and the Agricultural and Co-operative Departments of your Government? Have you any suggestions to offer?

Labour.

53. What labour (i) skilled, (ii) unskilled, do you employ in your factory in (*a*) the crushing, and (*b*) the silent seasons?

54. To what extent is skilled labour imported from abroad or from other parts of India?

55. To what extent have you been able to replace skilled labour imported from abroad by Indian labour?

56. What arrangements have been made for housing your labour and for promoting its welfare?

Power.

57. Are you able to meet the whole of your requirements of fuel from the bagasse available in your factory? If not, to what extent is it necessary to supplement it and how? Please give figures for the amounts spent on fuel for the last seven years. Do you bale your surplus bagasse?

By-products.

58. What are the by-products produced in your factory?

59. Please give the outturn and price of molasses for the last seven years. What are the causes of variations?

60. What is the market for your molasses and what are your arrangements for transportation? Are railway facilities adequate? What are the freight rates from the factory to the market you supply?

61. If you do not sell your molasses, how do you dispose of them? Have you any other suggestions for the utilization of molasses?

62. Have you any outlet for your surplus bagasse if any, and have you any suggestions as to what uses bagasse can be put?

63. Have you any suggestions for the utilization of any other by-products?

Storage and Transportation of Sugar.

64. Please give figures of your stocks of sugar at the beginning and end of each crushing season since 1930.

65. What are your arrangements for the storage of sugar and what is the capacity of your godowns? Have you increased your storage capacity in recent years or do you contemplate doing so?

66. To what extent does your sugar deteriorate or suffer damage in storage? What are the causes of such deterioration or damage and how far do they depend on the quality of sugar?

67. What is your practice with regard to the disposal of damaged sugar? Is it sold outright or reconditioned?

68. To what extent is the keeping quality of sugar susceptible of improvement?

69. To what extent is sugar damaged in transit from factories and to what is the damage due?

70. Have you experienced any difficulty in obtaining wagons for the transportation of sugar or delay in the delivery of sugar in the markets you supply?

71. Have you any suggestions for improvement of rail transport of sugar as for example in the type of wagon?

72. Please prepare a statement showing the prices at which during the last seven years the products of your factory have been sold at (i) ports and (ii) up-country centres. What are the freight rates to the markets you supply?

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Capital Account and Overhead Charges.

73. Please send copies of your balance sheets from 1930 or from the commencement of the operation of your factory. If you prepare no balance sheets please give particulars of the book value of your property as it stood at the end of the last complete year, under the following heads:—

(i) leases and concessions;
(ii) lands;
(iii) buildings;
(iv) plant and machinery;
(v) other assets.

74. Please state for each of the last seven years the particulars of the amount written off for depreciation. Are your rates for depreciation the same as allowed by the Income-tax Department? If not, state the difference.

75. Please state the amounts you have set aside for reserve fund during the last seven years.

76. Please prepare a statement for the last seven years showing the actual amount distributed as dividends on each class of capital (preferred, ordinary and deferred).

77. How is your working capital provided and at what rate are you able to borrow?

78. Please state the annual amount of your head office expenses and the managing agents' commission. How is the agents' commission determined?

79. What rate of dividend do you consider a fair return on capital?

Efficiency of Production.

80. In order to enable the Tariff Board to judge the extent of progress in efficiency attained by factories since 1930, the Board requires full information as to the cost of manufacture and recovery rate as far as possible in the annexed forms.

81. What reductions have you been able to make in your works costs since 1930 by (i) extending your plant, (ii) installing more efficient machinery, (iii) reducing overhead charges, and (iv) any other measures of economy?

82. To what extent is there room for further reduction of works costs or improvement in recovery rates?

Marketing.

83. What are the principal sugar marketing centres in which you deal?

84. What are the usual arrangements in the sale of sugar between (*a*) manufacturers and dealers, (*b*) dealers and retailers?

85. Is the present sugar contract form suitable in your opinion? Have you any suggestions?

86. What have been (*a*) the wholesale and (*b*) retail prices of sugar in the area covered by the distributing centres with which you are acquainted, for the last seven years? (Figures for Indian factory sugar and imported sugar may be furnished separately, with details as to quality.)

87. Does the difference between wholesale and retail prices tend to fluctuate widely? If so, what is the reason?

88. What are the storage arrangements made by dealers? To what extent does sugar deteriorate in storage?

89. Does Indian sugar deteriorate more rapidly than Java or other imported sugar? Has there been any impovement in the keeping quality of Indian sugar?

90. Is Java or other imported sugar preferred to Indian sugar? If so, by what class of consumers and why?

91. Do you consider the present quality of Indian sugar equal to the quality of Java or other imported sugar? If not, in what respects is Indian sugar inferior?

92. The sugar manufacturing season being limited to about one-third of the year, to what extent are stocks carried—

(*a*) by manufacturers,

(*b*) by dealers?

How is the carrying of stocks financed? What are the usual arrangements with banks or other financial agencies?

93. Do you consider that a marketing survey of the sugar industry would be advantageous?

94. Do you favour a central all-India selling organization?

95. Are you in favour of the standardization of Indian sugar? If so, on what basis would you suggest standardization

96. (*a*) To what extent has actual business been done by you on the basis of the sugar standards prescribed by the Director, Imperial Institute of Sugar Technology?

(*b*) Has any use been made of these standards for grading purposes?

97. Have you any suggestions to offer for increasing the usefulness of these standards?

98. Have you any other suggestions for the improvement of sugar marketing in India, such as the establishment of a "futures" or "terminal" market?

99. What is your estimate of the normal consumption of sugar in India? What are the possibilities of increasing consumption?

100. To what extent is factory sugar replacing gur, specially in the sweetmeat trade?

101. Under what conditions is there a possibility of starting subsidiary industries, such as manufacture of sweets and syrups, fruit-preservation and canning, etc.?

102. Please state the price of imported sugar during the last seven years; if possible give f.o.b. prices with the following items separately:—

(*a*) freight,

(*b*) insurance and trade charges,

(*c*) customs duty, and

(*d*) landing charges.

If this is not possible, please give c.i.f. prices, customs duty and landing charges.

NOTE.—As far as possible, prices of different qualities of sugar should be shown separately.

103. Have you any reason to believe that imported sugar has been landed at unremunerative prices in any year since 1930? If so, please state your reasons.

104. Has there been any export of Indian sugar (*a*) by sea, and (*b*) by land? Under what conditions do you think such export is feasible?

105. What has been the effect of (i) the Sugar Excise Duty of 1934, (ii) the addition made in 1937?

106. What are the marketing arrangements for molasses?

107. Is there any export of Indian molasses and to what countries? Are there any possibilities of the development of export?

Claim for Protection.

108. Since 1932 the rates of duties on sugar, sugarcandy and molasses imported into India have been as follows:—

Sugar—

Rs. 9-1-0 per cwt. from April, 1932.

Rs. 9-4-0 per cwt. from March, 1937.

Sugarcandy—

Rs. 10-8-0 per cwt. from February, 1934.

Molasses—

31¼ per cent. *ad valorem* from April, 1932.

To what extent has the measure of protection enjoyed by the industry been effective?

109. The Board has been asked to consider whether it is necessary to continue protection to the present extent or to a greater or lesser extent. Please state your views, giving reasons for any rates you may suggest for the remaining period of protection, *i.e.*, from 1st April, 1938, to 31st March, 1946.

110. What forms of assistance other than a protective duty do you consider necessary for the development of the industry? Please give your reasons in full.

111. What has been the effect of import duty on molasses? Has the duty adversely affected any industry in India?

FORM I.

TOTAL EXPENDITURE.

(*See Question 80, General Questionnaire.*)

Name of Factory.
Clarification process used.

Serial No.	Particulars.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
		Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
	Quantities.							
1	Weight of cane crushed							
	Weight of sugar made							
	Weight of molasses made							
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
	Cost of Raw Material.							
2	(*a*) Price of cane							
	(*b*) Freight, commission and other charges							
	Total price of cane delivered at the factory . . .							
	(*c*) Other raw materials							
	Manufacturing Expenses.							
3	(*a*) Power and fuel							
	(*b*) Stores							
	(*c*) Salaries and wages—							
	(i) Salaries of technical staff							

	(ii) Salaries of non-technical staff							
	(iii) Wages of labour							
	(*d*) Packing (including cost of gunny bags)							
	(*e*) Repairs and renewals							
	(*f*) Miscellaneous—Water, lighting, etc.							
	Overhead Charges.							
4	(*a*) Depreciation at statutory rates							
	(*b*) Interest on working capital							
	(*c*) Managing agents' charges							
	(*d*) Directors' and Auditor's fees							
	(*e*) Insurance							
	(*f*) Rents, rates, taxes (excluding income-tax and licence fees)							
	(*g*) Miscellaneous							
5	Total (2+3+4)							
6	*Deduct* value of molasses sold, and other credits realized, if any							
	NOTE.—Quantity of molasses destroyed as unsold to be stated.							
7	Net cost of sugar (5—6)							
8	Sales expenses including commission, brokerage, discount, etc.							
9	Excise duty							

Date——————

Manager.

NOTE.—It is requested that statements with six spare copies in this form for each complete working season from 1930-31 (or from the first season of operation) to the end of the working season 1936-37 be forwarded to the Secretary, Tariff Board, Ootacamund, not later than 25th June, 1937.

FORM II.

WORKS COST PER MAUND OF SUGAR PRODUCED.

(See Question 80, General Questionnaire.)

Name of Factory.
Clarification process used.

Serial No.	Particulars.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
		Per cent. Rs.	Per cent. Rs.	Per cent. Rs.	Per cent. Rs.	Per cent. Rs.	Per cent. Rs.	Per cent. Rs.
	Cost of Raw Material.							
1	(*a*) Price of cane							
	(*b*) Freight, commission and other charges							
	Total price of cane delivered at the factory . . .							
	(*c*) Other raw materials							
	Manufacturing Expenses.							
2	(*a*) Power and fuel							
	(*b*) Stores							
	(*c*) Salaries and wages—							
	(i) Salaries of technical staff							
	(ii) Salaries of non-technical staff							
	(iii) Wages of labour							

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	(*d*) Packing (including cost of gunny bags)							
	(*e*) Repairs and renewals							
	(*f*) Miscellaneous—water, lighting, etc.							
	Overhead Charges.							
	(*a*) Depreciation at statutory rates							
	(*b*) Interest on working capital							
	(*c*) Managing agents' charges							
	(*d*) Directors' and Auditors' fees							
	(*e*) Insurance							
	(*f*) Rents, rates, taxes (excluding income-tax and licence fees)							
	(*g*) Miscellaneous							
4	Total (1+2+3)							
5	*Deduct* value of molasses sold and other credits realized, if any							
6	Net cost of sugar per maund (4—5)							
7	Sales expenses including commission, brokerage, discount, etc.							

Date——————

Manager.

NOTE.—(1) Percentage of each item of works cost should be calculated on the net cost of sugar per maund (item 6).
(2) It is requested that statements with six spare copies in this form for each complete working season from 1930-31 (or from the first season of operation) to the end of the working season 1936-37 be forwarded to the Secretary, Tariff Board, Ootacamund, not later than 25th June, 1937.

FORM III.

MANUFACTURING DETAILS.

(See Question 80, General Questionnaire.)

Name of Factory.

Clarification process used.

Serial No.	Particulars.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1	Cane crushing—							
	Date start							
	Date finish							
	Duration of season . . . Days							
	Total days actual crushing							
	Total hours actual crushing							
	Total cane milled . . . Mds.							
2	Juice and added water—							
	Average mixed juice per 100 cane							
	Average added water per 100 cane							
3	Sugar made—							
	Grade I . . . Mds.							
	,, II . . . ,,							
	,, III . . . ,,							
4	Molasses made . . . ,,							
5	Recovery—							
	Average recovery of marketable sugar per 100 cane							
	Average production of final molasses per 100 cane							
6	By-products—							
	Bagasse, maunds per cent. cane							
	Press cake, ,, ,, ,,							
7	Stores—							
	Coal, ,, ,, ,,							
	Firewood, ,, ,, ,,							
	Other fuel, ,, ,, ,,							
	Lime, ,, ,, ,,							
	Limestone, ,, ,, ,,							
	Coke, ,, ,, ,,							
	Sulphur, ,, ,, ,,							
	Lubricants, gallons per 100 Mds. cane							
	Filter cloth, square yards per 100 Mds. cane							
	Filter bags number per 100 Mds. cane							
	Gunny bags for sugar, number per 100 Mds. cane							

8	Analyses—								
	Cane	Sugar per cent.							
		Fibre per cent.							
	Primary juice	Sugar per cent.							
		Brix per cent.							
		Purity							
	Mixed juice	Sugar per cent.							
		Brix per cent.							
		Purity							
	Last juice	Sugar per cent.							
		Brix per cent.							
		Purity							
	Clear juice	Sugar per cent							
		Brix per cent.							
		Purity							
	Sugar I	Sucrose per cent.							
		Moisture per cent.							
	Sugar II	Sucrose per cent							
		Moisture per cent.							
	Sugar III	Sucrose per cent.							
		Moisture per cent.							
	Final molasses	Sugar per cent.							
		Brix per cent.							
		Purity							
	Bagasse	Sugar per cent.							
		Water per cent.							
		Fibre per cent.							
	Press cake	Sugar per cent.							

Date————————

Manager.

NOTE 1.—Please state—

(*a*) if purities noted are G. P. or P. G. P.;
(*b*) whether mixed juice has been measured, weighed or calculated.

NOTE 2.—True average should be given.

NOTE 3.—It is requested that statements with six spare copies in this form for each complete working season from 1930-31 (or from the first season of operation) to the end of the working season 1936-37 be forwarded to the Secretary, Tariff Board, Ootacamund, not later than 25th June, 1937.

No. 1 (A).- Extract from General Questionnaire to be replied by mills who did not send any reply to the General Questionnaire.

(Information required up to the end of working season 1936-37.)

1. In what year did your factory begin the manufacture of sugar and what is its full capacity?

2. What has been the output of your factory for each of the last seven years?

3. What is the process of manufacture of your factory?

4. What changes have been made in the lay out of your factory and what extensions of plant or replacement of machinery have been made since 1930? Please state the amounts spent.

5. What further extensions or replacements are you in contemplation?

6. Do you undertake cultivation of sugarcane; if so, please give the following information:—

(*a*) total area held;

(*b*) average area under cane each year;

(*c*) varieties of cane grown;

(*d*) system of cultivation with special reference to fallows, rotation and manuring;

(*e*) average yield per acre for different varieties of cane and their sucrose content, and

(*f*) cost of cultivation per acre, in as much detail as possible.

7. What has been the duration of the crushing season for each of the last seven years and what are the reasons for variations?

8. Please give figures of your stocks of sugar at the beginning and end of each crushing season since 1930.

9. Have you increased your storage capacity in recent years or do you contemplate doing so?

10. What reductions have you been able to make in your works costs since 1930 by—

(i) extending your plant,

(ii) installing more efficient machinery,

(iii) reducing overhead charges, and

(iv) any other measures of economy?

Capital Account and Overhead Charges.

1. Please give the following information:—

(*a*) Block capital in 1930-31 or the first year of operation whichever is later.

(*b*) Block capital for 1936-37.

(*c*) Depreciation written off during this interval.

(*d*) Renewals and additions during this interval.

Information should be given under the following heads:—

(*a*) Lands.

(*b*) Buildings.

(*c*) Plant and machinery.

(*d*) Other assets such as railways, sidings, furniture and electric installations.

2. Please state the amount you have set aside for reserve fund during the last seven year.

Is your reserve fund invested in the business or are there any earmarked investments representing the fund?

3. Please prepare a statement for the last seven years showing the actual amount of dividend distributed on each class of capital (preferred, ordinary and deferred).

4. How is your working capital provided and at what rate are you able to borrow?

5. Please state the annual amount of your head office expenses and the managing agents' commission. How is the agents' commission determined? Please give figures showing the actual amount of commission due and the amount of commission paid.

No. 2.—Questionnaire for Sugar Refineries.

NOTE.—1. Reply to this questionnaire, if possible with six spare copies, should reach the Secretary, Tariff Board, Ootacamund, before 25th June, 1937, at the latest.

2. The answers may be confined to matters with which you are directly acquainted and on which you are in a position to supply the Board with detailed evidence.

3. Unless otherwise required, it is requested that figures may be supplied from the working season of 1930-31 (or if the factory started working after 1930-31, from the first year in which the factory started operation) up to the end of working season 1936-37.

4. Figures may kindly be given per acre or per standard maund (82$\frac{2}{7}$ lb.) as the case may be.

5. It is suggested that a note may be made of any facts or figures which you will like to be considered as confidential. Such information will not be published. In no case will any indication be given in the Tariff Board Report of the source of information or the name of any individual or factory except with permission.

1. In what year did your factory first commence manufacture and what is your maximum capacity? Does your factory refine only or does it also crush cane?

2. From what materials do you refine sugar? What qualities of sugar do you make?

3. What has been your output of sugar during the last seven years? To what causes do you attribute variations?

4. Are you able to obtain sufficient quantity of raw material and at what prices?

5. What are your sources of supply and what is the method of transportation?

6. What has been your average recovery of sugar during the last seven years? How far do you consider an improvement possible (*a*) in the method of manufacture of the raw material, (*b*) in the process of refining, to improve recovery rate?

7. Please state in as much detail as possible the cost of manufacture of one maund of sugar in your refinery during the last seven years. What are the causes of variations?

8. How does your sugar compare in quality with ordinary factory sugar? Please state the prices obtained for different qualities of sugar during the last seven years.

9. What are the markets you supply and what are the freight rates?

10. What has been your output for molasses and what prices were obtained during the last seven years?

11. What has been the effect of (*a*) the Sugar Excise Duty imposed in 1934, (*b*) the excess imposed in 1937?

12. Under what conditions can refineries continue to operate in competition with sugar factories?

FORM I.

TOTAL EXPENDITURE.

Name of Factory.
Clarification process used.

Serial No.	Particulars.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
		Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
	Quantities.							
1	Weight of *gur*/jaggery melted							
	Weight of sugar made							
	Weight of molasses made							
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
	Cost of Raw Material.							
2	(*a*) Price of *gur*/jaggery							
	(*b*) Freight, commission and other charges							
	Total price of *gur*/jaggery delivered at the factory							
	(*c*) Other raw materials							
	Manufacturing Expenses.							
3	(*a*) Power and fuel							
	(*b*) Stores							
	(*c*) Salaries and wages—							
	(i) Salaries of technical staff							

	(ii) **Salaries of non-technical staff**							
	(iii) **Wages of labour**							
	(*d*) **Packing (including cost of gunny bags)**							
	(*e*) Repairs and renewals							
	(*f*) Miscellaneous—Water, lighting, etc.							
	Overhead Charges.							
	(*a*) Depreciation at statutory rates							
	(*b*) Interest on working capital							
	(*c*) **Managing Agents' charges**							
	(*d*) **Directors' and Auditors' fees**							
	(*e*) **Insurance**							
	(*f*) **Rents, rates, taxes (excluding income-tax) and licence fees** .							
	(*g*) **Miscellaneous**							
5	Total (2+3+4)							
6	*Deduct* value of molasses sold, and other credits realized, if any .							
	NOTE.—Quantity of molasses destroyed as unsold to be stated.							
7	Net cost of sugar (5—6)							
8	**Sales expenses including commission, brokerage, discount, etc.** .							
9	**Excise duty**							

Date——————————

Manager.

NOTE.—It is requested that statements with six spare copies in this form for each complete working season from 1930-31 (or from the first season of operation) to the end of the working season 1936-37 be forwarded to the Secretary, Tariff Board, Ootacamund, not later than 25th June, 1937.

FORM II.

WORKS COST PER MAUND OF SUGAR PRODUCED.

Name of Factory.
Clarification process used.

Serial No.	Particulars.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
		Per cent. Rs.	Per cent. Rs.	Per cent. Rs.	Per cent. Rs.	Per cent. Rs.	Per cent. Rs.	Per cent. Rs.
	Cost of Raw Material.							
1	(*a*) Price of *gur*/jaggery							
	(*b*) Freight, commission and other charges							
	Total price of *gur*/jaggery delivered at the Factory . .							
	(*c*) Other raw materials							
	Manufacturing Expenses.							
2	(*a*) Power and fuel							
	(*b*) Stores							
	(*c*) Salaries and wages—							
	(i) Salaries of technical staff							
	(ii) Salaries of non-technical staff							
	(iii) Wages of labour							
	(*d*) Packing (including cost of gunny bags)							

	(e) Repairs and renewals							
	(f) Miscellaneous—Water, lighting, etc.							
	Overhead Charges.							
3	(a) Depreciation at statutory rates							
	(b) Interest on working capital							
	(c) Managing agents' charges							
	(d) Directors' and Auditors' fees							
	(e) Insurance							
	(f) Rents, rates, taxes (excluding income-tax) and licence fees							
	(g) Miscellaneous							
4	Total (1+2+3)							
5	*Deduct* value of molasses sold and other credits realized, if any							
6	Net cost of sugar per maund (4—5)							
7	Sales expenses including commission, brokerage, discount, etc.							

Date——————————

Manager.

NOTE.—(1) Percentage of each item of works cost should be calculated on the net cost of sugar per maund (item 6).

(2) It is requested that statements with six spare copies in this form for each complete working season from 1930-31 (or from the first season of operation) to the end of the working season 1936-37 be forwarded to the Secretary, Tariff Board, Ootacamund, not later than 25th June, 1937.

FORM III.

MANUFACTURING DETAILS FROM CENTRAL REFINERIES WORKING BY THE VACUUM PAN PROCESS.

Name of Factory.
Clarification Process used.

Serial No.	Particulars.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1	*Gur*/jaggery melting—							
	Date start							
	Date finish							
	Duration of season . . . days							
	Total days actual melting . . ,,							
	Gur melted . . . Mds.							
	Drainings melted . . . ,,							
	Total melt . . . ,,							
2	Sugar made—							
	Grade I							
	Grade II							
	Grade III							
3	Molasses and Drainings (*a*)—							
	Molasses							
	Drainings							
4	Recovery—							
	Marketable sugar per 100 *gur*/jaggery							
	Marketable sugar per 100 melt							
	Final molasses per 100 *gur*/jaggery							
	Final molasses per 100 melt							

5	By-products—								
	Press cake per cent. melt								
	Chips per cent. melt								
6	Stores—								
	Coal per cent. melt								
	Other fuel (give name) per cent. melt								
	Total fuel in terms of coal per cent. melt								
	Other stores (with details)								
7	Analyses—								
	Gur/jaggery	Sugar per cent.							
		Brix per cent.							
		Purity							
		Invert sugar per cent.							
		Ash per cent.							
		Net Rendement							
	Drainings melted	Sugar per cent.							
		Brix per cent.							
		Purity							
		Invert sugar per cent.							
		Ash 2							
		Net Rendement							
	Sugar (average for all grades)	Sucrose per cent.							
		Moisture							
	Final molasses	Sugar per cent.							
		Brix per cent.							
		Purity							
	Press cake	Sugar per cent.							
	Chips	Sugar per cent.							

Date——————

Manager.

NOTE 1.—Please state—

(*a*) if purities noted are G. P. or P. G. P.

(*b*) whether mixed juice has been measured, weighed or calculated.

2.—True average should be given.

3.—It is requested that statements, with six spare copies, in this form for each complete working season from 1930-31 (or from the first season of operation) to the end of the working season 1936-37 be forwarded to the Secretary, Tariff Board, Ootacamund, not later than 25th June, 1937.

No. 3.—Questionnaire for Manufacturers of Sugar by the Open Pan System and Khandsars.

NOTE.—1. Reply to this questionnaire, if possible, with six spare copies, should reach the Secretary, Tariff Board, Ootacamund, before 25th June, 1937, at the latest.

2. The answers may be confined to matters with which you are directly acquainted and on which you are in a position to supply the Board with detailed evidence.

3. Unless otherwise required, it is requested that figures may be supplied from the working season of 1930-31 (or, if the factory started working after 1930-31, from the first year in which the factory started operation), up to the end of working season, 1936-37.

4. Figures may kindly be given per acre or per standard maund ($82\frac{2}{7}$ lbs.) as the case may be.

5. It is suggested that a note may be made of any facts or figures which you will like to be considered as confidential. Such information will not be published. In no case will an indication be given in the Tariff Board Report of the source of information or the name of any individual or factory except with permission.

1. Do you manufacture sugar directly from cane, or from juice or from rab? What is your process of manufacture?

2. What are your arrangements for obtaining cane/juice/rab? If you do not deal directly with the grower, who is your intermediary and what commissions do you pay?

3. Please state the average prices paid during each of the last seven years for one standard maund ($82\frac{2}{7}$ lbs.) of cane/juice/rab.

4. How far are variations in price of cane/juice/rab accounted for by—
   (*a*) prices obtained for cane supplied to vacuum pan factories in your vicinity;
   (*b*) gur prices?

5. Please give the following data for your process:—
   (i) the amount of juice extracted per 100 maunds of cane;
   (ii) the amount of rab manufactured from 100 maunds of juice;
   (iii) the amount of sugar extracted from 100 maunds of rab.

NOTE.—Figures may kindly be given in standard maunds of $82\frac{2}{7}$ lb.

6. How many qualities of sugar do you manufacture? What has been your output for each quality during the last seven years?

7. Please give in as much detail as possible your cost of manufacture of sugar during the last seven years.

8. What are the chief markets to which you supply sugar and what are your arrangements for distribution?

9. Please state the prices obtained for the various classes of sugar manufactured for the last seven years.

10. Is your sugar preferred to (i) gur, and (ii) Indian factory sugar? If so, why and by what class of consumers?

11. To what extent, if any, is Indian factory sugar replacing your sugar?

12. To what extent has competition from factory sugar resulted in closing down of open pan factories and khandsars in your neighbourhood in the last seven years?

13. How has (i) Sugar Excise Duty of 1934, (ii) addition imposed in 1937, affected you?

14. What are the main difficulties of the open pan/khandsari industry? Have you any suggestions for overcoming them?

No. 4.—Questionnaire for Gur/Jaggery Merchants.

NOTE.—1. Reply to this questionnaire, if possible with six spare copies, should reach the Secretary, Tariff Board, Ootacamund, before 25th June, 1937, at the latest.

2. Figures may kindly be given per standard maunds ($82\frac{2}{7}$ lbs.).

3. It is suggested that a note may be made of any facts or figures which you will like to be considered as confidential. Such information will not be published. In no case will any indication be given in the Tariff Board Report of the source of information or the name of any individual except with permission.

1. What are the principal gur/jaggery marketing centres in which you deal?

2. What are the different kinds of gur/jaggery marketed by you?

3. What are the chief centres from which you obtain your supply and what is the quantity obtained from each during the last seven years? To what causes do you attribute variations?

4. Has there been any variation in the quality of gur/jaggery in recent years? If so, for what reasons?

5. Please state the prices of various kinds of gur/jaggery for the last seven years. To what causes do you attribute variations?

6. Is there any relation between the price of gur/jaggery and sugar?

7. How far is there competition between gur/jaggery and

(i) Indian factory sugar,

(ii) khandsari sugar?

Is sugar replacing gur/jaggery in your market?

8. How long will gur/jaggery keep in good condition? Is there any variation in the keeping qualities of different kinds of gur/jaggery?

No. 5.—Questionnaire for local Governments.

NOTE.—1. Reply to this questionnaire, if possible with six spare copies, should reach the Secretary Tariff Board, Ootacamund, before 25th June, 1937, at the latest.

2. Figures may kindly be given per acre or per standard maund ($82\frac{2}{7}$ lbs.) as the case may be.

1. What has been the area under sugarcane in your province during the last seven years? What improved varieties are grown and what has been the approximate acreage under each?

2. How would you classify the different areas in your province in respect of differences in climatic conditions, methods of cultivation, etc. How much of the crop in each area is (*a*) irrigated, (*b*) unirrigated?

3. What are the irrigation rates in your province and on what basis are they determined? How have they varied in the last seven years?

4. Can you give an estimate of the cost of cultivation of cane to the cultivator in different areas (irrigated and unirrigated separately)? Has there been any variation in the cost in the last seven years? What is the average yield per acre and the average sucrose content?

5. Under present conditions what would you consider a fair price of sugarcane to the growers?

6. Has there been a marked variation in sugarcane cultivation in any specific area during the last seven years? If so, what are the causes of variations and how far in your opinion are they due to—

(i) climatic conditions including excess or defect in rainfall,

(ii) prices obtainable for sugar,

(iii) prices obtainable for gur/jaggery, and
(iv) prices obtainable for alternative cash crops?

7. Do you consider that there was overproduction of sugarcane in the season 1936-37 and in what areas? If so, would you suggest any scheme for restricting the area under cane?

8. What are the other cash crops in your province? How far do they form an alternative to sugarcane? If possible, please give an estimate of return per acre to an average cultivator from the various cash crops.

9. Can you give an estimate of the amount spent during the last seven years for the extension and improvement of sugarcane cultivation in your province?

10. What is the amount of contribution your province receives from the Government of India out of sugar excise or otherwise and how is it utilized? Do you consider it adequate?

11. Please give a brief account of—
(i) the research work that has been undertaken in regard to sugarcane and the control of disease,
(ii) measures adopted for the introduction of improved varieties of cane, improved methods of cultivation, use of manure, etc., during the last seven years.

12. What assistance has been received from—
(i) Imperial Council of Agricultural Research,
(ii) Coimbatore Sugarcane Research Station, and
(iii) Imperial Institute of Sugar Technology?

Are funds for research, both agricultural and technological, adequate?

13. To what extent have factories co-operated with the Agricultural Department of your province in the introduction of new varieties of cane and improvement in methods of cultivation?

14. Of the sugarcane grown in your province how much do you estimate is—
(*a*) crushed in sugar factories,
(*b*) utilised by open pan factories and khandsaris,
(*c*) turned into gur, and
(*d*) used for chewing purposes and for seed?

15. What are the main difficulties of cane growers in the cultivation of cane and its delivery to the factory?

16. To what extent is the Co-operative Department rendering assistance to cane-growers? How far have the cane-growers been organized and what cane-growing and cane-supplying Societies are working?

17. Are minimum prices fixed for sugarcane in your province under the Sugarcane Act XV of 1934? If so, what is the basis of their fixation? Has the system worked satisfactorily?

19. How far do you consider it feasible to introduce a system of bonus payments over and above the minimum rates for superior, early and late varieties of cane?

20. What is the average cost of transport of cane by carts per maund per mile in different areas of your province?

21. Do cane-growers employ their own carts or do they have to hire them? If they have to hire carts, what is the average cost of hiring?

22. Do you consider rail, road and tramway facilities for transport of cane adequate? What assistance has been given in your province towards the development of feeder roads and tramway systems?

24. What particular assistance has been rendered to any individual factory in your province by the provision of capital, concessions in regard to land, water rate charges, etc.

25. What co-operative sugar factories are there in your province and how are they working?

26. Are conditions of labour in factories satisfactory?

27. Please supply (i) the wholesale and (ii) the retail prices of sugar in the important markets of your province for the last seven years.

28. Has there been considerable variation between the wholesale and retail prices? If so, what are the reasons?

29. What is your estimate of the normal consumption of sugar in your province and what are the possibilities of increasing it?

30. What manufacturies of confectionery are there is your province and in what places? What is the material used.

31. Do you consider the development of the sugar industry has reached a stage in your province to necessitate—

(i) introduction of "zone" system by allotting special areas to different factories for their supply of cane, or

(ii) fixation of a quota for sugar manufacture by factories, or

(iii) licensing of (*a*) new factories and (*b*) extensions of existing factories?

32. What are the possibilities of starting any subsidiary industry such as manufacture of sweets and syrups, fruit preservation and canning, etc., in your province?

33. What is your estimate of production of gur from sugarcane for the last seven years?

34. From what material, other than cane, *e.g.*, date, palmyra, cocoanut palms is gur/jaggery produced in your province and what is your estimate of production?

35. Please state the prices obtained for various kinds of gur/jaggery in different areas during the last seven years. What are the causes of variations and how far are they due to—

(i) changes in acreage under sugarcane;

(ii) climatic and other conditions affecting the crop;

(iii) competition from Indian factory sugar.

36. Please give an estimate of the total annual consumption of gur/jaggery in your province since 1930. To what causes do you attribute the variations?

37. From what areas is gur/jaggery imported into your province? Please give approximate figures of imports during the last seven years.

38. To what areas is gur/jaggery exported from your province? Please give approximate figures of exports during the last seven years.

39. Is there any relation between the price of gur/jaggery and Indian factory sugar?

40. To what extent is Indian factory sugar replacing gur/jaggery in your province?

41. Please give an account of any research work undertaken towards improvement in the methods of manufacture of gur/jaggery.

42. Can you give the number of (i) open pan factories and (ii) khandsars in your province, and an estimate of their outturn of sugar, gur and molasses?

43. Please give an estimate of the cost of manufacture of sugar in open pan factories and khandsars.

44. To what extent has competition from factory sugar resulted in the closing down of open pan factories and khandsars in recent years?

45. The last Tariff Board was of opinion that an effort might be made to support the khandsari industry, both as holding an important position in the

agricultural system and as constituting an outlet for surplus cane (page 51 of the Report). How have conditions changed since 1930? What are your views as to the future of the industry?

46. What research work has been undertaken in your province to improve the open pan system and the manufacture of rab?

47. To what extent, in your opinion, has (i) the Sugar Excise duty of 1934, and (ii) the additional duty imposed in 1937, affected—

(*a*) the cane-grower;
(*b*) the manufacturer;
(*c*) the dealer, and
(*d*) the consumer?

49. Has any industry in your province dependent on the supply of sugar products or molasses been affected by the protective duties?

50. How are your statistics of acreage, production and prices of sugar and gur, etc., prepared and what is the degree of accuracy?

51. Have you any comments to make on any of the points raised in the other questionnaires?

सत्यमेव जयते

Indian Sugar Mills Association, Calcutta.

(1) *Letter No. TBE/2/253, dated the 6th July, 1937.*

With reference to your letter No. 173, dated the 11th May, 1937, I now beg to send herewith a memorandum containing, the considered views of the Committee in reply to the General Questionnaire issued by you in connection with the Enquiry into the Indian Sugar Industry.

The consolidated replies contained in the memorandum are based on answers received from 75 sugar factories.

The forms mentioned in the replies to Questions 108, 109 and 110 are sent along with separately bound.*

Memorandum submitted by the Committee to the Tariff Board (Sugar).

Nos. 1 and 4 (1).

Name of Factory with location and address.	Question No. 4 (1).	Question No. 1.	
	Process.	Year of starting.	Capacity (Tons).
1. Motipur Sugar Factory, Ltd., Motipur (Muzaffarpur)	DC	1933	900/1,200
2. Sitalpore Sugar Works, Ltd., Sitalpore (Saran)	DS	1933	800
3. Sasa Musa Sugar Works, Ltd., Sasa Musa (Saran)	S	1932	450
4. New Savan Sugar & Gur Refining Co., Ltd., Savan (Saran)	DS	1919	800
5. Indian Sugar Works, Siwan (Saran) . .	S	1934	400
6. Pursa Sugar Factory, Pursa (Champaran) .	S	1906	500
7. New Swadeshi Sugar Mills, Ltd., Narkatiaganj (Champaran)	S	1932	800
8. Gaya Sugar Mills, Ltd., Guraru (Gaya) .	DS	1934	850
9. Dumraon Raj Sugar Factory, Bikramganj (Shahabad)	S	1933	300
10. Ganga Deshi Sugar Factory, Ltd., Buxar (Arrah)	S	1924	100
11. Saraya Sugar Factory, Sardarnagar (Gorakhpur)	DS	1909	2,000
12. Punjab Sugar Mills Co., Ltd., Ghughli (Gorakhpur)	S	1926	600
13. Romkola Sugar Mills Co., Ltd., Ramkola (Gorakhpur)	DS	1932	400
14. Pipraich Sugar Mills, Ltd., Pipraich (Gorakhpur)	S	1932	300
15. Vishnu Pratap Sugar Works, Ltd., Khadda (Gorakhpur)	S	1933	400
16. Mahabir Sugar Mills, Ltd., Siswa-Bazar (Gorakhpur)	DS	1932	400
17. Ganesh Sugar Mills, Ltd., Pharenda (Gorakhpur)	DS	1932	500
18. Noori Sugar Works, Bhatni (Gorakhpur) .	DS	1924	500

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* Not printed. Confidential.

Name of Factory with location and address.	Question No. 4 (1).	Question No. 1.	
	Process.	Year of starting.	Capacity (Tons).
19. M. K. M. G. Sugar Mills, Ltd., Munderwa (Basti)	DS	1932	400
20. Basti Sugar Mills Co., Ltd., Basti (Basti) .	DC	1928	800
21. Popular Sugar Co., Ltd., Barhni (Basti) .	DS	1933	600/800
22. Basti Sugar Mills Co., Ltd., Walterganj (Basti)	DS	1932	700
23. Nawabganj Sugar Mills Co., Ltd., Nawabganj (Gonda)	DS	1933	1,600
24. Deshbandhu Sugar Mills, Ltd., (Dacca) .	DS	1934	250
25. Neoli Sugar Factory, Neoli (Etah) . .	DS	1933	600
26. Kesar Sugar Works, Ltd., Baheri (Bareilly) .	S	1933	1,200
27. Lakshmi Sugar & Oil Mills, Ltd., Hardoi (Hardoi) (Refinery)	..	1935	1,200
28. Kamlapat Motilal Gutaiya Sugar Mills (Gur Refinery) (Cawnpore)	..	1910	..
29. The Oudh Sugar Mills, Ltd., Hargaon (Sitapur)	S	1933	1,600
30. Lakshmiji Sugar Mills Co., Ltd., Maholi (Sitapur)	DS	1932	1,000/1,200
31. Simbhaoli Sugar Mills, Ltd., P. O. Baksar (Meerut)	DS	1933-34	400
32. Daurala Sugar Works, Daurala (Meerut) .	DS	1932	800
33. Amritsar Sugar Mills Co., Ltd., Rohana Kalan (Muzaffarnagar)	DS	1934	1,000
34. Upper India Sugar Mills, Co., Ltd., Khatauli (Muzaffarnagar)	DS	1933	600
35. Ganga Sugar Works, Balwali (Bijnor) . .	..	..	80/90
36. Dhampur Sugar Mills, Ltd., Dhampur (Bijnor)	S	1933	600
37. Marsland Price & Co., Ltd., Kalamb (Poona) .	DS	1934	450
38. Kolhapur Sugar Mills, Ltd. (Kolhapur) .	DS	1934	450
39. Ravalgaon Sugar Farm, Ltd., Ravalgaon (Nasik)	S	1933	270
40. Phaltan Sugar Works, Ltd., Sakharwadi (Phaltan)	DS	1934	400
41. Belapur Co., Ltd., Harigaon (Ahmednagar) .	S	1934	630
42. Maharashtra Sugar Mills, Ltd., Belapur Road (Ahmednagar)	DS	1934	750
43. Belvandi Sugar Farm, Ltd., P. O. Belvandi Sugar Farm (Ahmednagar) . . .	S	1936	250

Name of factory with location and address.	Question No. 4 (1).	Question No. 1.	
	Process.	Year of starting.	Capacity (Tons).
44. Saraswati Sugar Mills, P. O. Abdullapur (Ambala)	DC & DS	1933	400
45. Amritsar Sugar Mills Co., Ltd., Amritsar (Gur Refinery)	..	1925	..
46. Jagatjit Sugar Mills Co., Ltd., Kapurthala (Punjab)	..	1928	..
47. The Sree Rama Sugar Mills, Ltd., Bobbili (Vizagapatam Dist.)	DS	1934	150
48. The Vuyyuru Co-operative Industrial & Credit Society, Ltd., Vuyyuru (Kistna)	DS	1934	850/1,200
49. Etikoppaka Co-operative Industrial & Credit Society, Ltd., Etikoppaka (Vizagapatam)	DS	1934	50
50. Mysore Sugar Co., Ltd., Mandya (Mysore)	DS	1937	1,400
51. Al. Vr. St. Sugar Mills & Distillery, Tachan nalur (Tinnevelly) (Gur Refinery)	..	1897	25
52. Sri Ram Krishna Sugar Mills, Kirlompudi (E. Godavari)	DS	1935	120
53. Pioneer Sind Sugar Mills Co., Ltd., Pritamabad (Sind)	S	1934	300
54. Vishnu Sugar Mill, Ltd., Gopalganj (Saran)	S	1932-33	150
55. Upper Ganges Sugar Mills, Ltd., Seohara (Bijnor)	DS	1933-34	1,100
56. Padrauna Rajkrishna Sugar Works, Ltd., Padrauna (Gorakhpur)	S	1922	850
57. Jagdish Sugar Mills, Ltd., Kathkuiyan (Gorakhpur)	S	1933	400
58. North Bengal Sugar Mills, Co., Ltd., Gopalpur (Rajshahi)	DS	1933	2,000
59. Coimbatore Sugar Mills, Ltd., Podanur (Coimbatore District)	DS	1934	..
60. Ratna Sugar Mills Co., Ltd., Shahganj, (Jaunpur)	DS	1934	500
61. East India Distilleries and Sugar Factories Ltd., Nellikuppam (South Arcot)	..	1930	1,000

Name of factory with location and address.	Question No. 4 (1).	Question No. 1.	
	Process.	Year of starting.	Capacity (Tons).
62. Rohtas Industries, Ltd., P. O. Dehri Sugar Mills (Dehri-on-Sone) (Shahabad) . .	DC	1933·34	1,800
63. Harinagar Sugar Mills, Ltd., Ramnagar (Champaran)	DS	1933·34	1,000
64. Balrampur Sugar Mills Co., Ltd., Balrampur (Gonda)	DS	1933	750
65. Ryam Sugar Co., Ltd., Ryam (Darbhanga) .	DC	1914	750
66. Cawnpore Sugar Works Ltd., Marhowrah Factory, Marhowrah (Saran) . . .	DS	1904	950
67. Tulsipur Factory of Balrampur Sugar Co., Ltd. (Gonda)	DS	1936	800
68. Purtabpore Co., Ltd., Mairwa (Gorakhpur) .	DC	1903	800
69. Chanpatia Sugar Factory of Champaran Sugar Co., Ltd., Chanpatia (Champaran)	DS	1932	850
70. Barrah Sugar Factory of Champaran Sugar Co., Ltd., Bara-Chakia P. O. (Champaran)	DC	1907	900/1,000
71. Samastipur Central Sugar Co., Ltd., Samastipur (Darbhanga)	DS	1920-21	750
72. Gauri Factory of Cawnpore Sugar Works, Ltd., Gauribazar (Gorakhpur) . . .	DS	1916	750
73. Ganga Sugar Corporation Ltd., Deoband (Saharanpur)	C	1933-34	700
74. Cawnpore Sugar Works, Ltd., Cawnpore (Refinery)	..	1894	..
75. Shankar Sugar Mills, Ltd., Captainganj (Gorakhpur)	S	1934	800
76. The Bihar Sugar Works, Pachrukhi (Saran)	DC	1923	1,000
77. Mahaswastika Sugar & Industrial Corporation, Ltd., Deoria (Gorakhpur) . .	DS	1932-33	200
78. Deccan Sugar & Abkhari Co., Ltd., Samalkot (East Godavari) (Gur Refinery) . .	..	1899	40
79. Darbhanga Sugar Co., Ltd., Lohat Factory, Lohat (Darbhanga)	S	1902	1,300

Name of factory with location and address.	Question No. 4 (1).	Question No. 1.	
	Process.	Year of starting.	Capacity (Tons).
80. Darbhanga Sugar Co., Ltd., Sakri Factory, Sakri (Darbhanga)	S	1933	700
81. Campierganj Sugar Mills, Ltd., Campierganj (Gorakhpur)	S	1934	250
82. Gujranwala Sugar Mills Co., Ltd., Rahwali (N. W. R.)	DS	1933-34	300
83. Upper Jumna Swadeshi Sugar Mills ,Co., Ltd., Mansurpur (Muzaffarnagar)	DS	1932	750
84. Upper Doab Sugar Mills, Ltd., Shamli (Muzaffarnagar)	DS	1933-34	800

4. The process of manufacture is shown in the table under question No. 1. In the sulphitation process, the plant is less expensive and the process is cheaper to work. On the other hand, the carbonatation process is more positive in its action, yields a higher recovery, and the sugar produced is of a better keeping quality. The principal items which raise the cost of carbonatation are limestone, which has to be used to a quantity about 4 per cent. of the weight of the cane, and coke. The determining factor will therefore be the distance of the factory from the quarries and the coal-fields.

7. (*a*) The overhead charges of a factory decrease relatively per unit increase of crushing capacity. The larger the factory, the less are the proportionate charges on skilled directing staff, depreciation and certain factory operations. The size will ultimately be determined by the Capital available, the availability of raw materials at a reasonable price in the neighbourhood and the facility of access to markets.

(*b*) The determining factors are the quality of cane and the duration of the working season. Generally speaking, for Northern India, the minimum economic size is 500 tons crushing capacity and for Western and Southern India 400 tons.

8. Simple parts such as cast iron tanks and pipes and other plants comparatively easy to manufacture are obtainable in India. Generally speaking, sugar machinery is a specialised manufacture and has to be imported.

9. (*i*) Two factories say that they have their own expert staff and that no factory with a properly equipped laboratory needs technical assistance from the Institute. On the other hand four factories point out that only companies which control a group of factories can afford to maintain a special technical control organisation of their own. Others will have to depend on the Institute for help in their own particular problems. They say that the Institute has not a staff adequate enough to render this assistance, that it should be strengthened so that the Director or a technical Member of his staff could be spared to visit factories needing his assistance at least once a year.

The statistical value of the Institute's work is recognised by factories generally, but it is pointed out that the Director's reviews and statements are published too late to be of effective use. A factory points out the delay in the Institute is due to delays on the part of factories in submitting their returns and suggests that a legal penalty should be provided to deal with such delays.

(*ii*) All factories agree that the Industries Departments in the provinces have given no assistance to factories since they are not qualified to give advice.

The Gaya factory (South Bihar) makes the suggestion that the Industries Department of Bihar should have a sugar section with a Sugar Technologist capable of giving advice to factories.

The factory at Kirlampudi makes the following comment: " the factories are not deriving any assistance from the Industries Department of our Local Government because the Department has not got on its staff a suitable Technologist. It is desirable that the Industries Department in Madras should have on its staff an experienced Sugar Technologist who can command the confidence of the factories. Then only will the Industries Department be in a position to give reliable advice ".

10. The following factories undertake cultivation of sugarcane :—

Bihar.

1. Ryam Sugar Co	Purchase outright.
2. Samastipur Central Sugar Co.	Both purchase and lease.
3. Barrah Factory of Champaran Sugar Co. . .	Both purchase and lease.
4. Chanpatia Factory of Champaran Sugar Co. . .	Both purchase and lease.
5. Marhowrah Factory of Cawnpore Sugar Co. .	Lease.
6. Pursa Sugar Factory . .	Purchase.
7. New Swadeshi Sugar Mills .	Both purchase and lease.
8. Dumraon Raj Sugar Factory	Purchase.

In the first 6 cases, there was no difficulty in obtaining the lands. In the case of Marhowrah factory, however, the following remark is made: " No special difficulties were encountered provided that the Company were prepared to pay higher prices demanded. It is observed that when the company wishes to obtain land very high rates are demanded but when they wish to sell or sub-let, only low rates are obtained ".

The New Swadeshi Sugar Mills point out that they are unable to obtain land in the neighbourhood of factories on reasonable terms.

The Dumraon Raj Factory experiences great difficulties in acquiring land. It seems to them that even the Land Acquisition Act will not help.

United Provinces.

Purtabpur Sugar Co. . .	Both purchase and lease.
Pipraich Sugar Mills . .	Lease.
Mahabir Sugar Mills . .	Lease.
Punjab Sugar Mills (Ghughli)	Lease.
Nawabganj Sugar Mills Co., Ltd.	Lease.
Walterganj Factory . . .	Lease.
Basti Sugar Mills, Basti . .	Lease.
Neoli Sugar Factory . .	Purchase.
Daurala	Lease.

In the first case as the lands were obtained about 80 to 90 years ago it is not possible to say what difficulties there were. Nawabganj has obtained a lease from the Court of Wards and its difficulty has been that land is not demarcated and there are always disputes which are not easily settled. Walterganj states that the land is parcelled out into small holdings and difficulties are experienced in getting their tenants to vacate and give possession. Daurala experienced great difficulty in purchasing land as it belongs to a number of small Zaminders, all of whom are not prepared to sell. Where the Zaminder cultivates the land he does not want to be thrown out of employment. Where the field belongs to an occupancy tenant, the Zamindar often withholds his consent.

Bombay.

All the factories in Bombay cultivate their own cane on land which they have acquired:—

Kalamb Factory . . .	Lease.
Kolhapur Sugar Mills . .	Lease.
Phalton Sugar Works . .	Lease.
Belapur Co., Ltd. . . .	Lease.
Ravalgaon Sugar Farm . .	Purchase and lease.
Maharashtra Sugar Mills Co. .	Lease.
Belvandi Sugar Farm Ltd. .	Purchase and lease.

The last two have had difficulty in acquiring their lands.

South India.

Mysore Sugar Co.	Lease.
Etikoppaka Co-operative Credit and Industrial Society	This is a Co-operative Society of which 63 Members own 200 acres of land and the balance of 150 acres belongs to non-Members.

सत्यमेव जयते

11.

Name of Factory.	Total area held. (a)	Average area under cane each year. (b)	Varieties of cane grown. (c)	Average yield per acre. (e)	Sucrose content (per cent.).
1	2	3	4	5	6
Ryam Sugar Co.	37	12	Coimbatore	400	
Samastipur Central Sugar Co.	1,000	500	Co. 212	640	11·42
			213	616	13·22
			281	610	13·72
			290		13·02
			313	617	11·41
			331	780	

Name of Factory.	Total area held. (a)	Average area under cane each year. (b)	Varieties of cane grown. (c)	Average yield per acre. (e)	Sucrose content (per cent.).
1	2	3	4	5	6
Barrah Sugar Factory	1,217	400	Co. 210	512	9·61
			213	606	9·61
			281	463	8·37
			299	432	10·60
			313		
			331	683	10·34
Chanpatia	237	40	Co. 210		
			213		
			299	432	10·97
			313		
			331	741	11·16
Marhowrah Sugar Factory	1,276	258	Co. 213	407	
			281	542	
			299	464	
			313		
			331	598	
			419		
Pursa Sugar Factory	2,800	900	Co. 210	300—400	
			213		
			299		
			313		
			326		
New Swadeshi Sugar Mills	600	200	Co. 213	300	
			299		
			313		
			331		
Dumraon Raj Sugar Factory.	100	50	Co. 213	400	
			219		
Purtabpore Sugar Factory	4,350	1,065	Co. 199	526	9·27
			210	475	9·33
			213	577	11·00
			281	352	10·62
			313	603	10·63
			331	656	8·26
Pipraich	2,500	600	Co. 223	600 1st cane	
			250	300 ratoon	
			285		
			290		
			312		
			331		
			393		

सत्यमेव जयते

Name of Factory.	Total area held. (a)	Average area under cane each year. (b)	Varieties of cane grown. (c)	Average yield per area. (e)	Sucrose content (per cent.).
1	2	3	4	5	6
Nawabganj Sugar Mills Co.	1,150	200	Co. 213	400	
Walterganj Factory .	108	72	Co. 213 312	438	
Basti Sugar Mills . .	850	440	Co. 213	468 cane 172 ratoon	
Neoli Sugar Factory .	725	250	all Coimbatore varieties.	200	
Daurala Sugar Works .	1,750	1,100	early Co. 313 385 medium 244 312 late 331 349 356	700 to 850 mds.	9·37
Kalamb Factory . .	5,000	1,400	E.K. 28 POJ. 2878 Co. 290	Adsali 36 tons Plant 37·08 Ratoon 34·7	
Kolhapur Sugar Mills .	2,200	1,100	POJ. 2878 E.K. 28 Co. 290 HM. 89	35 tons 40 35 40	12·13 ,, ,, 11·12
Phalton Sugar Works .	8,400	1,500	EK. 28	EK. 30 tons	EK. 13·91 POJ. 13·22 Co. 12·40
Belapur Co., Ltd. . .	10,334	2,750	POJ. 2878 E.K. 28 Co. 290 Co. 419	40·4 tons 34·4 40·7	14·15 ,,
Ravalgaon Sugar Farm .	5,475	1,100	POJ. 2578 E.K. 28 Co. 290 Co. 349 HM. 320	50 to 30 tons	
Maharashtra Sugar Mills .	5,000	1,800	POJ. 2878 E.K. 28 Co. 290	40 tons	

Name of Factory.	Total area held. (a)	Average area under cane each year. (b)	Varieties of cane grown. (c)	Average yield per area.	Sucrose content (per cent.). (e)
1	2	3	4	5	6
Belvandi Sugar Farm	1,700	375	POJ. 2878 E.I. 28 Co. 290	45 tons 45 tons 40 tons	12·5 12·6 11·0
Mysore Sugar Co.	1,532	800	HM. 320 2878	39·1	13 to 14
Etikoppaka	..	..	Co. 213 J. 247 Co. 243 281	20 tons 30 tons 15 tons	15 14 15

No. 11 (d) and (f).

Name of factory.	System of cultivation. (d)	Cost of cultivation.* (f)
Ryam Sugar Co.	No fallow system—they grow cane on cane and use the trench system.	
Samastipur Central Sugar.	There has been no crop rotation other than green manure—cane fallow cane being the system adopted.	
Barrah Sugar Factory	Cane fallow, cane on irrigable lands and cane, fallow, grain crop, fallow cane on unirrigable lands. Of the lands under cane 150 acres are manured each year with farmyard manure and the balance with an application of chemical manure amounting to about 60 to 70 per cent. of Phosphoric acid and Nitrogen.	
Chanpatia Factory	Cereal fallow, cane, Cereal and so on farm-yard manure at 400—600 maunds per acre.	
Marhowrah Factory	Rotation is cane, fallow cane. Green manure crop is planted in addition 400 lbs. of castor meal and 110 lbs. of nicifos are applied per acre.	

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* Confidential. Not printed.

Name of factory.	System of cultivation. (*d*)	Cost of cultivation.* (*f*)
Pursa Sugar Factory .	Rotation is cane fallow, cereal crop, green manure, cane.	
Purtabpore Sugar Factory	Cane, fallow green manure, compose and farmyard manure at 400 mds. per acre mustard cake 10 mds. per acre, double superphosphate 2 mds. Sulphate of Ammonia 1 md.	
Pipraich Sugar Mills .	Cane, ratoon, fallow or wheat, fallow cane.	
Nawabganj Sugar Mills .	Cane, ratoon, fallow or green manure.	
Walterganj Factory .	Cane, ratoon fallow.	
Basti Sugar Mills, Basti .	Cane, ratoon, green manure.	
Daurala . . .	Cane, ratoon, green manure, fallow.	
Kalamb Factory . .	Green manuring is done in about ¼ of the total cane area of 1,400 acres. Oil cakes such as groundnut and castor and Ammonium Sulphate are used as stop dressing manures.	
Kolhapur Sugar Mills .	Usual fallow method is followed. In the fallow rotation sann is grown for green manuring. 67 cwt. of sulphate of ammonia, 1 cwt. of nicifos II and ½ ton of groundnut cake per acre.	
Phalton Sugar Mills .	....	
Belapur Co., Ltd. . .	Cane fallow, fallow cane, cane ratoon fallow, fallow cane. Oil cake groundnut or castor and sulphate of ammonia are applied at the rate of 5·5 lbs. of nitrogen per actual ton of cane per acre.	
Ravalgaon Sugar Farm .	Sann hemp, oil cake and sulphate of ammonia.	
Maharashtra Sugar Mills .	Give farmyard manure, sand green manure, ammonia sulphate and oil cake.	
Belvandi Sugar Farm, Ltd.	....	
Mysore Sugar Co. . .	Cane fallow and green manure.	
Etikoppaka Co-operative Credit and Industrial Society.	No information.	
Pioneer Sind Sugar Mills .	....	

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* Confidential. Not printed.

		(a)	(b)
12.	Ryam Sugar Co.	35	*Nil*
	Samastipur Central Sugar Co.	100	*Nil*
	Barrah Sugar Factory	10	*Nil*
	Chanpatia Sugar Factory	10	*Nil*
	Marhowrah Sugar Factory	3	190
	Pursa Sugar Factory	60	*Nil*
	Purtabpore Co.	23	*Nil*
	Pipraich Sugar Mills	5	10
	Nawabganj Sugar Mills	4	*Nil*
	Walterganj Sugar Factory	*Nil*	*Nil*
	Basti Sugar Mills, Basti	8	*Nil*
	Daurala Sugar Works	40	80/100
	Kalamb Factory	10	*Nil*
	Kolhapur Sugar Mills	10	150
	Phalton Sugar Mills	*Nil*	*Nil*
	Belapur Co., Ltd	*Nil*	*Nil*
	Ravalgaon Sugar Farm	*Nil*	*Nil*
	Maharashtra Sugar Mills	10/15	*Nil*
	Belvandi Sugar Farm, Ltd.	*Nil*	*Nil*
	Mysore Sugar Co.	30	*Nil*
	Etikoppaka Co-operative Society	*Nil*	*Nil*
	Pioneer Sind Sugar Mills	32	*Nil*

13. *Ryam Sugar Co., Samastipur Central, Barrah, Chanpatia, Marhowrah Factory.*—Early and late varieties have had their comparative yields tested by variety trials together with mill trials to show their sugar content. The Agricultural Departments of United Provinces and Bihar have offered considerable assistance. As regards manurial experiments they are being carried out in order to make comparison between inorganic and organic manures as also the proportionate and quantity values of Nitrogen Phosphate and Potash.

Pursa Sugar Factory.—Experiments have been carried out with Coimbatore varieties in organic and artificial manures. The Agricultural Department has helped with seed and advice.

Pipraich Sugar Mills.—Experiments have been made with early and late varieties. Co. 213 has proved the best from an all-round point of view. Manurial experiments have been made both as regards artificial and organic manures. Castor cake mixed with Sulphate of Ammonia and Potash has given good results on ordinary cultivable land whereas in land reclaimed from the Jungle, Sulphate of potash, Super phosphate and press mud ash have proved more useful.

Nawabganj Sugar Mills Co.—Early and late varieties have been tested but without success. The Agricultural Department has been helpful.

Basti Sugar Mills Co.—Late and early varieties have been tried but with no appreciable results. The Agricultural Department has helped with seed and in tubewell borings.

Daurala Sugar Works.—One experiment is made annually with reference to early and late varieties. Manurial tests have been carried out on a considerable scale.

Kalamb Factory.—No definite experiments were made in respect of early and late varieties. Manurial experiments have, however, been carried out. The best results were obtained by a combination of organic manures like oil cakes with Ammonium Sulphate.

Kolhapur Sugar Mills.—Experiments have been made.

Belapur Co., Ltd.—Late maturing varieties have been tried without success. Potash and Phosphatic manures have been tried but without definite results. The Agricultural Department has not been asked for help in experimental work. The Company however anticipates future assistance from the Research Station at Padegaon started by the Imperial Council of Agricultural Research.

Ravalgaon Sugar Farm.—Experiments conducted show that heavy manures and irrigation give a very heavy crop without appreciably reducing the sugar content. No assistance has been received from the Agricultural Department.

Maharashtra Sugar Mills; Belvandi Sugar Farm.—Experiments conducted. The Agricultural Department of the Bombay Government has not been of much direct help. " It is not fully equipped for experiment on methods of varieties of cultivation for the requirements of the modern factories ". The Imperial Council of Agricultural Research Station is doing some useful work.

Mysore Sugar Company.—No experiments made, with reference to early and late varieties. Experiments have been made to ascertain the effect of varying quantities of Nitrogen and Phosphatic acid in the manures applied. The Mysore Agricultural Department has been of considerable assistance.

14. (*a*) *Bihar.*—There has been a steady increase in the quantity of cane available for factories since 1930, except for the year following the earthquake.

United Provinces.—There has been a steady increase in the quantity of cane available. The two causes responsible for this increase in quantity are:—

(1) the extensions of the area under sugarcane due to the large increase in the number of factories.

(2) The substitution of the Coimbatore varieties for deshi cane. Roughly speaking, this substitution means at least a 50 per cent. increase in the yield.

Punjab.—A similar increase is reported by the Punjab factories.

Bengal.—There has been an increase in the acreage and the yield.

Western India.—As the factories grow their own cane they regulate their own supplies. Two factories—Maharashtra and Phaltan—however, report that the area they grow is not sufficient for their requirements and that owing to difficulties in procuring land and the restrictions imposed by the Irrigation Department, it is difficult to increase their area. Both these factories have to supplement their own supplies by outside cane and as in this part of India the prices depend on the prices of jaggery, they often have to pay uneconomical prices for cane.

South India.—The Mysore and all the Madras factories except the Vuyyuru factory report an increase in the quantity.

The last mentioned factory says that the position is stationary. It must be remembered however that in the Vuyyuru area cane is being grown as a new crop.

(*b*) Practically all the factories in India report that there has been no appreciable improvement in quality, apart from the improvement produced by the substitution of Coimbatore canes for deshi canes. What differences there are from year to year are ascribed to seasonal variations and not to any improvement or otherwise in quality. The good work done by the agricultural departments in spreading Coimbatore canes is generally recognised.

15. *Frost.*—The areas subject to frost are the Punjab, the western districts of the United Provinces, Sind, and rarely the Bombay, Deccan, Central and East United Provinces and Bihar. Bengal and Southern India are exempt.

Punjab factories report that in a severe frost 90 per cent. of the cane area is affected and they estimate the loss at 50 per cent. Daurala in West United Provinces says that they get frost once in every five years and that the loss is about 20 per cent. In a bad year like 1934-35 they had to burn half the cane in their firms as it was entirely ruined. The factory at Deoband (Saharanpur District, West United Provinces) says that 80 per cent. of the crop is damaged in a bad frost, but it does not estimate the extent of the loss.

The Bombay Deccan cane had a severe attack of frost in January and February of 1929 and two mild attacks since. The loss in 1929 was 27 per cent. of the crop, but that was very exceptional. The milder attacks caused 5 to 10 per cent. loss in the young cane. The maturer crop does not suffer seriously as the affected portions are harvested before deterioration sets in.

Diseases.—Reports from factories do not always distinguish between diseases and pests, and therefore a good deal of confusion exists between the two. The effects of diseases, however, are very much less serious than those of insect pests. The principal diseases noticed are the following:—

(1) *Mosaic.*—This has been noticed in Bihar, Bengal, Punjab, Bombay and Madras.

(2) *Red Streak diseases of Sugarcane.*—This has been found in Bihar and Bengal.

(3) *Sugarcane Fungus diseases.*—Which have been noticed all over India but of which no proper survey has been made.

(4) *Red rot.*—Which has been found in Bombay and Madras. It does not cause a great deal of damage but is occasionally severe, following weakening by other causes. It has also been controlled by instructing tenants to dig out and burn all infected plants. Considerable loss is reported from this disease in a certain estate though no exact percentage calculation has been made. It affects not only the crop in the growing stage but also the outturn of sugar.

(5) *Smut.*—This was observed in South India particularly in Co. 213. It has been brought under control at Nellikuppam by giving up the planting of Co. 213 and by careful removal of infected plants and other varieties.

Pests.—These cause the largest amount of loss and among them the most serious is the borer. A borer survey was carried out in February, 1937 of the supplies of cane delivered during that month to 5 factories controlled by Messrs. Begg Sutherland & Co. These factories were, Ryam, Samastipur, Marhowrah, Barrah and Chanpatia,—all in North Bihar. These factories are situated in the districts of Saran, Darbhanga and Champaran and the results of the survey may be taken as fairly representative of the condition of sugarcane crop in the whole of North Bihar. It disclosed that borer infestation prevails to an alarming degree and its extent in 41·32 per cent. of the crop. This high degree of infestation has supressed the sugar in cane to such an extent that the loss of commercial sugar over the 5 factories amounted in February to 41,000 maunds, that is to say, every factory in North Bihar may be taken to be losing 8,000 maunds of sugar every month during the crushing season. A survey made in 1935 in the same group of 5 factories showed that the percentage of loss was 21 per cent. This is an indication of the rapid rate at which the pest is progressing.

It is a matter of the utmost importance that the Provincial Agricultural Departments of Government should take steps immediately to check, reduce or eradicate this infestation as individual action by factories is likely to be of little avail on account of the migratory nature of the Borer pest.

The United Provinces Sugar Co. which owns a factory at Seorahi made a survey in February. They found that the incidence of borer was 46 per cent., that the recovery of sugar which was 10·2 per cent. on sound cane was reduced to 9·67 in the case of infested cane and that the estimated loss in sugar for February milling attributable to Borer and infestation, was 6,738 maunds.

The Belsund Factory carried out tests in April of this year and 35 per cent. of the cane was found to be affected.

The Belapur Factory in Bombay did not suffer so severely from the borer. It estimates its loss at 5 per cent., Kalamb Factory at 15 to 25 per cent.

The Nellikuppam Factory in South India carried out a survey in 1936. 28 per cent. of the cane showed infestation and the juice quality of the unsound canes was considerably poorer than that of the actual canes. The other pests are, Pyrilla (cane fly) Mealy Wing and Mealy Bug. No survey has been made of the effects of these pests but the Nellikuppam factory assesses the damage as a 10 per cent. reduction in yield and 5 per cent. reduction in quality. The Mealy Wing and the Mealy Bug are not serious pests.

Pyrilla did considerable damage in the western districts of the United Provinces in 1934-35 but no estimate of the extent of the damage has been made.

16. In Western India the factories grow their own cane and, with the exception of Phaltan and Maharashtra which have been unable to get all the land they want, all of them are assured of a supply of cane sufficient for their requirements.

In Southern India there is as yet no crowding of factories, each factory has a definite source of supply in cane-growers, and a sufficiency of cane is assured.

In Bengal there is no lack of assurance on the part of factories.

The case is different in Bihar, the United Provinces and the Punjab. Here, except in a few cases where factories are in an isolated portion, or have a privileged source of supply to draw upon as in the case of a factory which is in friendly arrangement with a large agricultural estate, no factory is able to say that its future supplies are assured. In the current season, the cane has been plentiful, but even so a factory like New Savan (Saran District) had to import 30 per cent. of the requirements from a distance by rail. In normal years there is keen competition for cane and from March onwards the price rises rapidly, the price offered varying with the intensity of the competition. Even old established factories dealing with growers for many years, say that their supply is assured only in the event of competition being eliminated.

Varieties and yield.—Co. 210 and 213 are the principal varieties grown in Bihar, the United Provinces and the Punjab though in the Western districts of the United Provinces Co. 210 is replaced by Co. 244. The yield per acre varies from 150 to 500 maunds and the sucrose content from 9 to 12 per cent.

In Bengal Co. 213 and a local variety known as *tanna* prevail.

In Western India the principal varieties are POJ. 2848, EK 28, and Co. 290. EK 28 has replaced the indigenous Poondga which was formerly in high favour. The tonnage and sucrose content are higher than in Northern India, the average yield varying from 30 to 50 tons or over, of cane per acre, and the sucrose content from 11 to 15 per cent. The expenses of cultivation are higher, and roughly speaking, vary for the plant cane, grown in the normal season from Rs. 330 to Rs. 500 per acre. For the ratoon the cost is lower and for the *adsali* crop higher. The adsali is the name given to a lay-season crop planted in January and cut 18 months later with the benefit of two monsoons.

The Bombay cane gets much more artificial irrigation than any cane except that of Southern India and is heavily manured with oil-cakes and artificial fertilisers, as farmyard manure is scarce in the area.

The main varieties grown in Southern India are Co. 213, Co. 281 and J. 247. The yield is about 20 tons per acre. In Mysore HM. 320 is the main variety, an acre gives 23 tons, and the sucrose content varies from 11 to 17 per cent. according to the time the cane is cut.

17. The competition referred to is absent in Bengal, Western and Southern India.

It is as a general rule correct to say that in Bihar, the United Provinces and to a lesser extent in the Punjab competition by factories has had a considerable influence on supplies and on prices. Competition is specially keen from March onwards. Competitive prices have certainly stimulated the increase in the cane area. Factories sometimes enter into zone and boundary agreements with neighbouring factories and in such cases of course, the influence of this factor is eliminated. Another arrangement by which competition is avoided is by agreement with guarantors and reliable and influential zamindars. But in a season of short cane, factroies go long distances to areas outside their natural sources and force up prices. In normal seasons from the beginning many factories in the Bihar and United Provinces areas pay one anna above the official rate for cane.

18. *Bihar, United Provinces and the Punjab.*—(*a*) The only variation has been in the direction of a steady increase in the area.

(*b*) A decrease in the rainfall certainly diminishes the outturn, but an increase, even where it amounts to flooding, increases the yield and leads to early ripening.

The prices obtainable for sugar have been the largest factor in stimulating an increase in the area. In Bihar and United Provinces the Government formula directly connects the price of cane with that of sugar, and in the Punjab though there is no such formal connexion the rates paid for cane approximate to the official rates in the United Provinces.

The prices obtainable for Gur have had no effect as they have always been lower than those for sugar.

There has till now been no competing cash crop of equal attractiveness. What will happen in the future is matter for theorising. The effect of the recent increase in the price of wheat and raw cotton, is however to be watched with interest.

Bengal.—(*a*) There has been an increase in the area under cane due to jute restriction propaganda by the Bengal Government and replacement of jute by cane.

(*b*) In Bengal the only practical effect has been from the propaganda referred to above. If the price of jute crop goes up to Rs. 8 a maund or above, then the cultivation of cane is likely to be affected.

Western India.—The question does not materially affect Western India where the factory raises its own cane. For outside cane, Gur has always been a competing factor.

Southern India.—In Mysore and in the northern districts of the Madras Presidency, the rise of the sugar industry has brought new areas under cane. Rainfall and the prices obtainable for sugar are factors influencing cultivation. There has been no competing cash crop in the areas producing cane.

19. No doubt, the production of sugarcane during the season 1936-37 "has been the highest on record". A similar remark would have been

true of the cane crop of each of the preceding years as there has been a continuous increase during the past few years in both the area under cane and in the output. This statement therefore should not be taken to mean that there is necessarily an over-production of cane but should be taken only as a comparative statement with reference to past years' crops. As a matter of fact in all the areas outside Bihar and United Provinces, the factories want more cane than is now produced and not less. For instance, the North Bengal Sugar Factory (Rajshahi district) complains of a shortage of cane in 1936-37. The Jagatjit Sugar Mills in the Punjab say that they could have crushed more cane if only good cane had been available. The factory at Phaltan in Western India complains that it does not get enough cane to feed its mills.

Even in the United Provinces and Bihar the reports of the factories show that there is no over-production of cane taking each province as a whole. There was perhaps too much in certain areas and too little in others. It was a case not of surplus production but of maladjustment. For instance, a factory in the Saran District of Bihar says " we had to import 30 per cent. of our requirements. There was insufficient cane even this season in the immediate vicinity of our factory ". A factory in the Gonda district of United Provinces had to draw 38 per cent. of its supplies from outstations. A factory in the Meerut district of the United Provinces writes "the production of cane though highest in 1936-37 was quite insufficient for us as about one half of the cane crushed was imported from outside. On our side, not only no restriction is necessary, but further encouragement is required ". It has been noticed that there was plenty of cane standing in the fields in Moradabad while in Meerut many factories closed down for want of cane. Further west, a factory in the Saharanpur District complains of a shortage of cane and does not hope to satisfy its full requirements for another three or four years. The only material excess appears to have been in the Gorakhpur area and the areas adjoining it in Bihar. In that area, the cane area jumped up from 213,000 acres in 1935-36 to 270,000 acres in 1936-37. An enquiry conducted by the local Government in Gorakhpur has however shown that in the coming season the cane area will be reduced to below 200,000 acres.

The Director of the Imperial Institute of Sugar Technology has stated that if the cane acreage of 1935-36 were to be put at the figure 100, the acreage for 1936-37 should be taken to be 126 and he anticipates that the next season's acreage would be 87.

In the circumstances, this Association is of the opinion that no restriction is necessary in the cane acreage as things seem to be remedying themselves. Moreover, it must also be borne in mind that wheat and raw cotton prices are gradually veering round and a palpable increase in the prices of these commodities is bound to have effect on the acreage under cane.

The Sugar Committee of the Imperial Council of Agricultural Research at its last meeting in May 1937 considered the question and passed the following resolution:—

> " In view of the increases which have taken place and of the increase in yield per acre, there is no scope for any important general increase in the cane area in India but the present distribution is imperfect ".

If the words " or decrease " were inserted between " general increase " and " in the cane area in India " the resolution as thus amended would exactly express the views of this Association.

20. It is noted that this question relates to the cost of cultivation by *an average cultivator* and not to cultivation on a Government farm or a factory estate. Generally speaking, on the average private farm both the cost of cultivation and the yield are likely to be less than on a state or farm. A factory in Bombay however makes the remark, " the cultivators' cost is

generally higher than ours, as their method of farming is crude and varieties also are not modern and no expert staff is at their disposal. Also their cultivation is confined to small patches ". We interpret this to mean that in such cases the yield is relatively poorer both in quality and in sugar content and therefore the proportionate cost is higher.

The cost of cultivation on factory farms (where such exist) has been given in detail under Question 11 (*f*).*

An elaborate inquiry into the cost of cultivation by private farmers of sugarcane and cotton has been proceeding for the last three years and more under the joint auspices of the Imperial Council of Agricultural Research and of the Indian Central Cotton Committee who have employed a special staff for this purpose in every province and States in India which is important for these crops. It is understood that the figures thus gathered are not being analysed and tabulated and that they may be released to the public by October of this year. The inquiries made by factories have no pretention to any such official elaborateness and many factories assign no money value to the personal labour of the farmer or of his wife and children. Nor is any allowance entered in these estimates for the implements or bullocks which the men already own for their general cultivation, apart from sugarcane. We offer these figures* with all reserve as it is common knowledge that costs of cultivation are apt to vary considerably and the farmer is averse to entering into estimates of his expenditure.

21. The grower's difficulties in the cultivation of cane may be summarised as under:—

Bihar, United Provinces and the Punjab.—(1) Insufficiency of good seed. The Agricultural Departments can do valuable work in this direction if adequately staffed and financed.

(2) Lack of irrigation facilities. Though in the Indo-Gangetic valley the amount of irrigation required is less than in Western or Southern India, yet the present facilities are inadequate in many places. A survey of the possibilities of extension of irrigation from tube-wells and canals is suggested.

(3) Insufficient protection against cane diseases and pests. The notes under Question 15 have shown what a serious loss the grower is suffering particularly from pests throughout this area. The Committee understand that the Imperial Council of Agricultural Research has formulated a scheme of research on the insect pests of sugarcane and a special officer is working on it at the Institute at New Delhi. But the provincial part of the work is moving very slowly. Infestation by borer is a growing menace to the sugarcane cultivator and unless very prompt and energetic action is taken serious danger is apprehended.

(4) Insufficient educative propaganda about better methods of manuring and cultivation. The notes under Question 20 have shown that the standard of cane cultivation in Bihar, United Provinces and the Punjab is inferior to that in Bombay, and specially that manuring is neglected. In Northern India the cane crop is cultivated by a large body of ryots, while it is a specialised crop in Bombay and Madras. There is therefore a great scope for educative and demonstrative work on the part of the agricultural departments.

(5) Lack of village and feeder roads and the poor quality of existing roads. Complaints under this head comes from all parts of Bihar and the United Provinces. The difficulty is intensified in Bihar where carts are forbidden to use the metalled track and the cart-tracks running parallel to the metalled track are reduced to a powdery dust with which bullocks have to struggle.

It is suggested that Provincial Governments should take special action in this matter and as a subsidiary remedy they should give active encouragement to factories to lay down local tramways for the carriage of cane.

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* Not printed. Confidential.

(6) The difficulties of finance. Sugarcane presents special difficulties to the grower as he has to wait something like 15 to 18 months for his investment to make a return. The remedy seems to be in a liberal grant of advances by factories. A summary process of recovery would tend to liberality in this respect.

Bengal.—Lack of communications from the field to the factory is the main complaint.

Western India.—The main complaints from factories in the Deccan Canal area which, it will be remembered, grow their own cane, are:—

(1) high irrigation charges.

(2) restrictions placed by the Irrigation Department.

(3) lack of encouragement for laying down tramways.

Southern India.—Here again, there are complaints of bad communication and of difficulties with the Irrigation Department.

22. (*a*) The last Tariff Board were against compulsory acquisition on the grounds—(1) that it would antagonise the expropriated ryot and his fellow-ryots and (2) that it would interfere with the traditional freedom of cultivation enjoyed by the Indian ryot. In the opinion of the Association these objections still prevail in full force, and the acquisition of land for a factory purpose should be left to voluntary negotiations.

(*b*) This question does not interest the factories in western India where they draw their entire supplies of cane from their own farms nor those in Southern India where factories have definite sources of supply in the fields of ryots with whom they enter into agreements. It is of importance however in the United Provinces and Bihar where owing to a large growth of new factories conditions have altered since the date of the last Tariff Board's report. The passing of Act XV of 1934 fixing a minimum price of cane and the fact that no insuperable administrative difficulties have been experienced have removed the main objection to zoning from the ryot's point of view. In the opinion of the Association it would be desirable both with a view to remove uneconomic competition for cane and to establish a more intimate personal relation between the factory-owner and the ryot to introduce a system of zoning.

Besides, zoning would also enable factories to develop their respective zones and help in the improvement in the conditions of cane cultivation, without fear of "poaching" by other factories. In the absence of zoning, no inducement is left to the factory to develop any area for cane supply as another factory may at any time come and take off cane therefrom. In short, zoning would be of mutual advantage to factories and to cane growers. In actual practice zoning conditions in United Provinces and Bihar have already tended towards the formation of a limited system of zoning as a result of the "Home Convention" adopted by the mutual agreement with the factories by the practice of co-operation with the railway authorities.

The Association understands that the question of zoning was discussed at the last meeting of the Sugar Committee of the Imperial Council of Agricultural Research held in May last when it was suggested that such factory should be assigned its zone, varying in size according to the capacity of the factory from which it should draw at least a certain percentage of its cane requirements and from which no other factory might draw cane.

The zone would as far as possible be an area round the factory. While no other factory, vacuum pan or open pan, should be allowed to purchase within the zone of another factory, the grower may be at liberty to make gur out of the cane if he so desires. The details of this scheme, however, will be worked out by each province according to its needs, and even provincial legislation may be required in certain cases to give effect to this scheme.

A large area will also be left unzoned from which all factories will be at liberty to draw their supplies of cane.

With regard to the working of the system of zones, detailed schemes will have to be drawn up by the provincial governments in consultation with the interests concerned. It may, however, be suggested that the working of the system should be entrusted in respect of a particular district or sub-division, or area to a Committee consisting of the representatives of all factories in the area, ryot's representatives, and a government official. This Committee should meet every year and define zones either by alloting separate blocks of fields to individual factories or by defining centres of purchase of cane. Such a Committee, without in any way disturbing the general outline of the zones once fixed, would be alive to any change in economic and crop condition which requires alterations in zones.

23. The Association considers that the development of feeder roads is the legitimate function of local boards assisted by Government if necessary. As regards advances of cash or supply of seed and manure, several factories even at present make them. Such advances should continue to be purely voluntary. It is suggested that if a summary process were provided for recovery of these advances the extension of the voluntary system would be facilitated.

24. (*a*) The Association considers that at present there is no need for fixing a quota, but realises that the need may arise in the near future.

(*b*) The last Tariff Board rejected a proposal for licensing on the grounds mainly,

(1) that enlightened self-interest would prevent capitalists from starting new factories where old ones already existed, and

(2) that the only safeguard for maintenance of fair prices for cane was competition between factories.

The expectation underlying the first ground has not been realised and the second ground has been removed by Act XV of 1934. The Association considers that all new factories and extensions of existing factories should be subject to license. The licensing should be entrusted not to Provinces but to an all-India body.

26. Practically all factories transport by carts drawn by buffaloes in Bengal and by bullocks elsewhere. The actual weight carried by a cart varies from 15 maunds to 27 maunds. About 20 mds. might be taken to be the average figure. A factory in East Bengal reports a weight as low as 10 mds. Rubber-tyred carts have been tried in several factories, but only one factory, *viz.*, Gauribazar introduced 10 rubber-tyred carts in 1934-35 and sold them outright to cane growers. In the following year 74 carts were purchased by the factory which were either hired out to cane-grower at a rent of Rs. 30 for the whole season or sold outright at a price of Rs. 230. In the current season as many as 177 rubber-tyred carts have been purchased off to cane growers either by sale or on hire. The use of such carts increases considerably the amount of load that can be carried. Some factories say the load can be doubled, others trebled, and yet others, quadrupled. The Gouribazar factory puts the increase on the old cart at 60 maunds as against 15. The two difficulties which stand in the way of popularising these carts are: (1) the capital cost which apparently is not lightened by employing of the hire purchase system, and (2) the bad condition of the roads. These difficulties are mentioned in every Province. Another difficulty mentioned in the United Provinces and Bihar is the gradient of the approach roads to railway culverts. The Daurala Factory points out that if rubber-tyres were used the owner of the cart has to change the body of the cart if he wants to load more cane, that is to say, quite a new cart has to be introduced and the old carts will become useless. The Mysore Factory suggests that the present country cart can be improved by the widening of wheel tyres and also by putting ball races to the axles. It says that even if the roads are improved the ryots would still stick to the ordinary type of cart as it is not only cheaper but serves the former in uses to which the rubber-tyred cart cannot be put.

27. Except in Western and Southern India the general complaint which is nearly universal is that feeder roads are in wretched condition and are not looked after by local bodies. A few factories in Bihar and United Provinces say that the mileage is adequate, but the majority are of an opposite view.

28. The longest distance quoted is 25 miles and the shortest is a quarter of a mile. The average mileage varies from 6 to 8 miles. The longest interval between cutting and delivery is 3 days (Baheri, Bareilly District); Mysore quotes 48 hours; a factory in Bengal quotes 24 to 48 hours; the Popular Sugar Factory (Barhni) in the United Provinces puts it at 36 to 40 hours; Motipur in North Bihar gives 26 hours; but otherwise the usual maximum is 24 hours, while the average interval is 12 hours.

Only two factories, Gauribazar and New Savan, say that the carters put leaves over the cane to protect it from the heat. The former adopts elaborate precautions, *viz.*, a thick layer of trash at back and top of the cane, watering *en route* at the weighbridges and two " pals " are issued to every rubber-tyred cart to spread over the cane.

The Baheri factory gives an interesting analysis of the effects of transport in open carts in the hot summer of Northern India on the purity of juice. It makes the point that Co. 213 is less liable to deterioration from exposure than the Deshi or other Coimbatore varieties.

30. The carts in Western and Southern India (excepting Mysore) pay no tolls; but in Northern India (Bengal, Bihar, United Provinces and the Punjab) tolls are levied,

(1) by district Boards on carts crossing ferries or river bridges,

(2) by municipalities on carts entering their limits, and

(3) by the Provincial Government on cane coming from Nepal territory.

The Saraswati Mills in the Ambala district of the Punjab who get supplies of cane from the Saharanpur district of the United Provinces have obtained a decision of the courts that cane is not liable to the tolls charged by the Saharanpur Municipality. The ratio of the decision was that cane formed the raw material of an excisable commodity.

The Gaya factory (South Bihar) and the Deshabandhu Mills (Dacca) complain of tolls levied on their own authority by zamindars. These imposts, dignified by the name of Chaudhariana, are said to be of uncertain amount.

31. The normal period of detention of carts ranges from 6 to 10 hours.

The arrangements for the continuous and uniform supply of cane naturally vary with the size of the factory and the quantity of gate cane it requires daily to feed its mills. A factory like the one at Samastipur for instance gets only 24 per cent. of its requirements at the gate, 76 per cent. being rail cane. It is able to deal with 40 carts in an hour, and as carts do not come in with rapidity, it finds it necesasry to supplement the supply with rail cane. Where large factories get the bulk of their cane supply at the gate, elaborate arrangements are necessary to obviate undue detentions. Some such factories have described their arrangements the main features of which are:—

(1) a rough survey of the standing crop in the villages supplying the factory.

(2) a division of the supply area into circles and the allotment of specific quantities to them.

(3) the division of the quantities by the number of working days of the crushing seasons, so as to arrive at a daily quota.

(4) the fixing of the number of carts for each circle with reference to the daily quota and the distribution by a special staff of purjis or permits to cartmen.

(5) the establishment of out-station weighbridges for the weighment of cane coming from centres buying at more than a specified distance from the factory.

(6) establishment of cart lines or lanes into which carts are shepherded in when they arrive at the factory.

(7) the improvement of cart roads inside the factory.

(8) the training of weighment clerks in quickness and precision in their task of weighing cane and issuing receipts.

These arrangements if adopted in entirely are ideal, but more and more factories are adopting as many of them as are practicable with reference to their own particular needs and conditions. The purjis or permit system is practically in force everywhere. The allotment of particular days of the week or particular portions of the day for particular villages as a device against undue detention is also in practice. Factories are learning by experience how best to regulate supplies so as to get them in an orderly way and in quantities which the factory staff can deal with expeditiously in the day. One of the newer factories says:—"It was difficult to regulate supplies at the start of the season. Later on we tried the experiment of fixing different week days for taking cane from different directions. We have four main roads leading to the factory. We allotted fixed days of the week to the roads and advertised them. Every day we now get cane from one road only. This experiment has been successful and has resulted in the delivery of fresher cane and a speedier release of carts.

33. There is a scale of charges for each type of wagons per mile with a minimum rate per type of wagon and same is given herewith:—

Type of wagon.	Rate per mile.			Minimum type of wagon.		
	Rs.	A.	P.	Rs.	A.	P.
Open cane wagons 6, 8 and 10 tons 14 ft.	0	2	6	5	0	0
Open cane wagons 10 tons 16 ft. and 11 tons 15 ft. . .	0	4	3	7	0	0
Cage trucks 10 tons . . .	0	4	3	7	0	0
Cage trucks 12 tons . . .	0	4	9	8	0	0
Covered wagons	0	3	6	6	0	0

These rates have been in force for several years now and are higher than they were eight years ago but the present flat rate basis is preferable to a maundage basis. The Association prefers the existing system as the factories are accustomed to it.

34. Factories' replies are generally to the effect that the railway rates on limestone, coal, sulphur, manures and gunnies are excessive, the rate on limestone being seven times the value of the stone.

The Association would suggest that at least in the case of the less expensive sugarcane manures, a reduction in the freight might be made.

36. Replies from factories are to the effect that tramway system is generally speaking advantageous. The difficulties pointed out are (1) difficulty of acquisition of the lands, (2) uncertainty that the localities served by the tramway will continue to feed the factory that laid the line.

The second difficulty will be met by the adoption of a zoning system.

45. The answers from factories are to the effect that in Bihar and in the United Provinces the price of Gur or Khandsari sugar (where this exists) does not influence the supply of cane or its price. Gur is so unremunerative that the cane grower will not make gur where he can sell his produce to a factory. The Bengal, Western and Southern Indian factories say that the

price of gur influences the price of cane. Where gur prices go up, the price of cane also rises and the supply to the factory diminishes.

48. The Association is of the opinion that the existing formula which relates the price of cane to the price of sugar and the existing practice in the United Provinces and Bihar, which entails revision of the prico of cane every fortnight are both unsatisfactory. The formula results in a vicious circle, a fall in the price of sugar leads to a fall in the price of cane, this in turn leads to a fall in the price of sugar and so the process goes on. A fortnightly revision of the price creates undesirable uncertainty both in the minds of the ryot and of the factory-owner whose stocks of sugar produced from cane bought at a higher price deteriorate in price when the cane price is subsequently lowered. The price of cane should be disconnected from the price of sugar and should, it is suggested, be fixed on the cost of production of cane as ascertained by the Tariff Board in its present enquiries. It is necessary that the price should be uniform for both the United Provinces and Bihar. And the price once fixed at the commencement of the crushing season should be maintained for the whole of that season.

52. The answers from Bihar and the United Provinces express, generally speaking, satisfaction with the assistance given by the Imperial Council of Agricultural Research and the provincial Agricultural Departments. In the other provinces the feeling appears to be that the departments are not as much in close touch with sugar as they might be.

The suggestions made are:—

(1) that there should be more active work in connection with the control of sugarcane diseases and pests, and

(2) that there should be more active prapaganda directed towards translating the results of research into practice.

It is not generally realised that the function of the Imperial Council of Agricultural Research is to promote research and that it is the function of the agricultural departments to bring the results to the attention of the grower.

79. The Association considers that 10 per cent. on the original block accounts (without allowance for subsequent writings off for depreciation) would be a fair return. The reasons for this view are:—

(1) that in the years when new factories were started in large number, money was procurable only at high rates of interest, and debentures were generally issued at 7 to 8 per cent.

(2) the industry is a young industry and both in the interests of the factory and of provision for labour welfare, reserves have to be built up. If 10 per cent. is earned, 4 per cent. will have to be put aside for the reserve fund, and the actual dividend to shareholders would only be 6 per cent., and

(3) Provision has to be made against running risks, breakdown of machinery and so forth.

84. (*a*) In general sugar is sold through brokers who receive a commission which averages usually at one per cent. These brokers procure offers which if accepted would be confirmed either by a formal contract between the manufacturer and the dealers, or by a contract between the broker acting as principal and the manufacturer. In the former case, the dealer usually makes a deposit as earnest money.

(*b*) We are unable to give particulars of the arrangements between dealers and retailers.

85. The contract form first issued by this Association was objected to in certain particulars by sugar merchants. A conference between manufacturers and merchants took place under the auspices of the Association at Calcutta in January, 1937, and excepting on one point, unanimity was

reached as to the modifications required in the old form. We believe that the revised form is fair to both sides.

The point on which manufacturers and merchants could not agree was clause 8 of the contract. We have gone as far as we can go to meet the merchants' points but technical difficulties have stood in the way of a complete agreement.

89 and 91. " The best quality Indian sugar is as good as the best imported foreign sugar in keeping and other qualities."

" The better grade Indian sugars produced this year have been equal to or above the usual quality of Java or other imported sugars and the keeping quality of such sugars compares quite favourably. The average quality Indian sugar is not however equal to Java as it is smaller in grain, not so pure in colour and lacking in uniformity of crystal size and in uniformity regarding keeping quality."

90. Java sugar is preferred in hotels and restaurants run in the European style for their customers, Europeans and Europeanised Indians. But even here high grade Indian sugars are replacing Java sugar. To a very small extent, in the preparation of some special Indian sweets where customers like a bright, white colour, Java sugar is used.

92 (2nd Part). The Managing Agents of the factories provide the finance either themselves or through banks. The arrangements with the banks vary with the individual cases. In the most approved cases the banks value the sugar and drawings are permitted up to 70 per cent. of the value. The managing agents sign a trust receipt declaring that they hold the sugar on behalf of the bank which controls deliveries. Generally speaking in these cases the banks charge interest on the floating balances at 1 per cent. above the bank rate.

In other cases the banks insist on possession of the sugar, drawings are permitted up to 50, 55 or 60 per cent. of the value, and the interest charged may go up to as much as 3 per cent. over the bank rate.

Where banks refuse accommodation, managing agents provide finance in one of the following ways:—

(1) By hundis drawn on the market either (*a*) for a very temporary accommodation to cover the period between the date of the despatch of the goods and the date of their arrival at destination, *plus* three days of grace. In such cases the accommodation is provided on very easy terms, or, (*b*) by selling usance hundis for 60 or 90 days. The rate of interest depends on the market in which the hundis are sold.

(2) By debentures and mortgages issued at the initial stage on block account. The money so raised is utilised for working capital, after reserve is built up out of profits and until the debentures and mortgages become due. This method is rare.

(3) By taking deposits or borrowing from relatives, friends or money-lenders. The rates of interest in such cases are never less than 6¾ per cent. per annum.

93. The Association considers that a marketing survey would be of advantage as it is an essential preliminary to the operations of a central marketing organisation.

94. The Association is in favour of establishing a central sales organisation to be controlled by the Industry itself. Detailed proposals are under the consideration of a special Sub-Committee of the Association.

95. The Association is in favour of standardisation as it is an essential preliminary to the operations of a central sales organisation. Experience was not available when standards were tentatively suggested and factories were not able to adopt them. They had therefore to do business on the basis of samples of individual factories.

96. Actual business on the basis of the Director's standards has been done only by a very few factories. Several factories have however utilised the standards for grading their own sugar, and others have with their help classified their daily output.

It is stated by several factories that while they use the standards for grading their sugar, they are unable to do actual business on them as buyers, merchants and dealers do not possess a set of them.

97. A material reduction in the price of the standard may tend to popularise them.

98. The Association considers that the time is not yet ripe for the establishment of a Futures or Terminal market. Futures markets are difficult to control. No amount of rules will secure proper control as the working will depend on the men and not the rules.

99. This may be estimated at a million and one hnudred thousand tons.

Considering that the consumption of white sugar is only 7 lbs. per head as against 100 lbs. in western Europe, the United States and Australia, and that there has been a large increase in world consumption in recent years, there do seem to be possibilities of increasing the consumption. The present low prices are another factor in favour of an extension.

100. It is not possible to say to what extent factory sugar is replacing Gur as judging from statistics both industries are expanding. In the sweetmeat trade however it is a matter of common knowledge, that while for certain sweets gur is still preferred, the substitution of sugar for gur has gone far. It is impossible to make an estimate of the extent of this substitution.

101. The Association has no useful information on this subject.

103. In 1934, Java landed her sugar in India at unremunerative prices. The fact will be clear from the following statement of prices *ex*-duty of Java sugar c.i.f. Calcutta.

Date.	Price in Indian currency per maund.		
	Rs.	A.	P.
1933—			
January to March	3	12	2
April	3	12	5¾
May	3	10	7
June	3	13	6
July	3	13	0
August and September	3	11	6
October	3	10	6¼
November	3	9	1¼
December	3	4	1
1934—			
January	3	1	6
February	3	6	1
March and April 1st to 24th	3	5	1
April 25th to 3rd May	3	3	1
May 4th to 10th	3	1	9
May 11th to 20th	3	1	3¾
May 29th to 21st June	2	15	4½
July 9th to 16th	2	15	10½
July 17th to 30th	3	0	9¾
July 31st to 9th August	3	0	4
August 10th to 20th	3	1	3¾

	Price in Indian currency per maund.		
1934—	Rs.	A.	P.
August 21st to 26th September	3	0	4
September 27th to 6th October	2	13	4¾
October 7th to 10th	2	12	4¾
October 11th to 27th	2	13	4¾
October 29th	2	11	6
November 13th	2	9	9
November 14th	2	9	3

The last Tariff Board considered that under normal conditions the price of Java sugar landed in Calcutta would be Rs. 4 a maund *ex*-duty, but in circumstances of exceptional competition or for special reason, Java manufactures might go down to as low as Rs. 3-4-0 per maund. At the time Java was suffering from large accumulated stocks of unsold sugar.

The facts were brought at the time to the notice of the Government of India by a deputation from the Indian Sugar Mills Association which met the Hon'ble Members concerned on 24th November, 1934.

104. *Export of Sugar* (*in tons*):—

	By sea.	By land.
1930-31	493	40,126
1931-32	226	28,885
1932-33	437	27,729
1933-34	425	33,110
1934-35	363	34,034
1935-36	389	25,836
1936-37 (for ten months up to Jan. '37)	521	23,381

In the opinion of the Association facilities should be offered for exports of Indian sugar to the United Kingdom by admitting it at certificated colonial rates (1*sh.* 5·3*d.*). Exports will become possible when Indian price *plus* freight *plus* this preferential rate is equal to or lower than the price of non-Indian sugar landed in England after paying the regular customs duty. India at the moment does not make sugar of 96° polarisation as there is no internal demand for it. Indian sugar is about 99° polarisation.

105. (*i*) The imposition on an infant industry of an excise duty was premature. The burden of the impost was distributed amongst cultivators, manufacturer and consumer; nobody can say in what proportion.

(*ii*) The addition to the duty has thrown every section of the industry into disorder. The association wants to draw particular attention to the unfairness of increasing the duty in the middle of the working season, as such a course affects sugar made prior to the alteration in the duty.

106. (*a*) The following sugar factories amongst others have distilleries attached to them. In these cases there is a ready market for molasses:—

East India Distilleries and Sugar Factories, Nelikuppam (S. Arcot).
Rosa Sugar Works and Distilleries, Rosa (Shajahanpur).
Mysore Sugar Co., Ltd., Mandya (Mysore).

(*b*) Certain other factories which have no distilleries of their own are advantageously situated near consuming distilleries. Thus the Belapur factory is able to dispose of its whole production of molasses to the distillery at Nasik. The factory at Deoband (Saharanpur) sells a part to the Amritsar distillery. There are similar cases elsewhere.

(*c*) There are also small local markets for molasses for use in curing or mixing with tobacco and sometimes prices higher than those offered by the Indian Molasses Co. to which a reference is made below, are secured. For instance, the factory at Jarwal Road (Bahraich Dist.) was able to sell 42,000 maunds in 1935-36 to local dealers at 2 annas 9 pies a maund and 21,000 maunds in 1936-37 at 2 annas, while the price offered by the Indian Molasses Co. was round about 1 anna 5 pies. The best internal market for molasses is reported to be in Eastern Bengal where it is much in demand for hubble-bubbles. Factories like Beldanga (Bengal) are said to command a fair price going upto and beyond 8 annas a maund.

(*d*) By far the largest outlet for molasses has been the Indian Molasses Co. This firm which has its headquarters in Calcutta is auxiliary to the United Molasses Co. of Great Britain and in friendly relations with Distillers Limited which started operations on 8th February 1936. In the season 1935-36 which finished on 4th October 1936, they bought from Indian sugar factories 95,670 tons of molasses. In 1936-37 upto the 11th June they have purchased nearly 100,000 tons. They hope to buy more before the current season is over. Asked upto what extent they could develop this business they said they expected to raise the annual purchases to 135,000 tons in the next few years.

In 1935-36 the firm's purchases were from factories situated on or near the Bengal and North-Western Railway, the Oudh and Rohilkhand and the East Indian Railway in Bihar, and the United Provinces up to a line east of Cawnpore. This season so far all their purchases have been from factories on the Bengal North-Western Railway. Scarcity of tank wagons prevents development on the Oudh and Rohilkhand.

The average rate of price paid in the current season is 1 anna 5 pies. It was a few pies higher last season.

The firm's trade is purely an export trade for the world's markets. So far they have sent three cargoes, one to Italy and two others to United Kingdom. In United Kingdom the demand is for distilleries and cattle-feeding. In Italy it is practically all for use with *espresso* coffee. The largest consumer in the world is United States of America. Last year they were nearly sending a cargo to America, but Java cut them out by a small reduction in the prices.

The total Indian production of molasses, including Khandsari molasses, was 492,000 tons last year out of which 160,000 tons is estimated by the Imperial Council of Agricultural Research to be consumed internally. This left 32,000 tons free for export.

The firm has no complaint to make against Indian railway freight on molasses which it says is the lowest in the world. It is the long distances that make it unprofitable to expand the area of its operations.

107. *Export of molasses from India*—

——	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
Aden and Dependencies.	13	12	11	13	..	13	..
United Kingdom .	..	..	7	179	153	..	13,622
Ceylon . . .	390	656	707	890	890	925	923
Union of South Africa.	13	12	8	14	..	..	9,500
Other British Possessions.	13	21	13	19	..	36	..
Zanzibar and Pemba.	14	15	17	17	..	17	..
Other countries .	..	..	..	..	110	35	140
	443	718	764	1,141	1,153	1,026	24,185

There seems to be no possibility of development of exports beyond what is referred to in the answer to Question No. 106.

111. The following statement shows molasses produced in India and molasses imported into India in the last six years:—

	Indian Production.	Imports into India.
	Tons.	Tons.
1930-31	269,000	102,204
1931-32	365,809	40,191
1932-33	461,658	31,991
1933-34	430,000	2,401
1934-35	406,000	415
1935-36	494,000	*Nil*

It is the increase of Indian production that affected imports of molasses, and not the duty. No Indian Industry has suffered as molasses are available at nominal prices in India itself.

110. Has the Protection been effective from the Ryot's point of view?

We put this in the forefront because the Tariff Board of 1930-31 made the welfare of the ryot the main ground for their recommendation of protection for the sugar industry. We recognize that the interests of the ryot must prevail over every other in the consideration of questions affecting the future of the industry, and in saying this we believe that we are expressing the view not only of the 112 factories that are members of the Indian Sugar Mills Association, but also of the 34 factories that are not in it.

The last Tariff Board rested their case for protection to the ryot on the following grounds:—

(1) *Page 53 of the Report.*—The position which cane cultivation occupies in the agricultural economy of India and the impossibility of replacing it by another crop of greater profit to the agriculturist.

(2) The changed conditions which are being brought about by the introduction of improved varieties of cane resulting in a great increase in the crop outturn.

(3) The necessity on general agricultural grounds of maintaining or increasing the area under cane and to secure this end of providing an outlet for surplus cane.

(4) The serious crisis which must result in the gur industry as the result of over-production if no such outlets were provided.

(5) The substantial assistance which protection would afford to the agricultural classes in the agricultural depression as sugarcane is the only agricultural product the price of which is not determined by world conditions.

Page 49 of the Report.—For the above reasons, the Tariff Board proceeded to recommend a rate of duty on foreign sugar at a level which would ensure not merely the continuance of existing factories, but the rapid establishment of new factories. They suggested that efforts should particularly be directed towards the encouragement of white sugar manufacture in the United Provinces and Bihar. They considered it possible that with protection factories might be established in Bengal, Bombay and Madras, but not with equal rapidity.

Let us now review what has happened since 1932 when the protection recommended by the Tariff Board was given and see if the industry that has sprung up in response to it has fulfilled the hopes of the Board and if any changes in agricultural conditions have taken place that affect the case for protection as then laid down. The best method of examination would be to take up every one of the above points in succession.

(1) *The Importance of sugarcane in the agricultural economy of India.*

No crop of equal or greater profit has been discovered. Cane still occupies the premier place as a cash crop.

(2) *Changes brought about by improved varieties.*

When the last Tariff Board reported, the area under improved cane was 800,000 acres. Since then, due to the outlet provided by the increased number of factories and the attractive prices offered by them the process of substitution has gone fast, and the area now under Coimbatore and other improved canes is 2,700,000 acres.

(3) *Necessity for maintaining or increasing the area under cane.*

The total area under cane has, due to the same causes, jumped up from 2,902,000 acres to 4,431,000 acres.

(4) *The necessity for an outlet for cane to prevent an agricultural crisis.*

Page 49 of the Report.—The response to the protection has been much bigger than the Tariff Board contemplated. They visualised a manufacture of sugar to some 4 to 5 hundred thousand tons, if a crisis were to be avoided. As a matter of fact, the manufacture has in the current season exceeded a million tons.

(5) *Substantial assistance the ryots' in a time of severe agricultural depression.*

The assistance afforded by the Industry to the agriculturist can be judged by figures.

(*a*) *Answer to an interpellation in the Council of State on 16th February, 1937.*—The Government of India have estimated the price paid for cane to cultivators by sugar factories at Rs. 833 lakhs in 1935-36.

(*b*) *Page 42 of the Tariff Board's Report.*—The quantity of cane crushed in factories in 1935-36 was 9,801,748 tons. At an average production of 13 tons an acre, this gives an acreage of 761,673 under cane solely fed by factories. On the basis that one acre represents the area grown by a family of five members, the factory industry maintains on the fields 3 millions 8 hundred thousand people. To this must be added such additional hired labour as is employed in weeding, harvesting and transporting.

(*c*) Exact figures of what the ryot makes from gur are not available. But inquiries show that his average earning from this source does not exceed 9 pies to 2 annas per maund. A comparison of this with the minimum price fixed for cane in normal years gives the measure of the profit to the cultivator from disposal of his product to the factory.

What the starting of a factory in a new area means to the rural population can be judged from the report of the Mysore Sugar Company which states that in 1935-36 the cultivators received 24 lakhs of rupees for the cane they grew and sold to the factory. Or, take a typical case of the development of a place like Baheri in the Bareilly district of the United Provinces. When His Excellency Sir Harry Haig visited it recently, it was officially brought to his notice that three years ago, Baheri was little more than a group of huts, the houses were mostly mud hovels with thatched roofs, and its lanes were in a deplorable condition. The establishment of two sugar factories in Baheri by Bombay capitalists has brought sudden and welcome prosperity to it. Pucka houses and shops have been built, a system of drainage has been laid down by voluntary subscription, and a town hall has been presented to the town by one of the factories to house a library and the Area Committee which looks after the community's needs in the newly born town.

Has the Protection been effective from the Industrialist's point of view?—Reference has already been made to the emphasis laid by the last Tariff

Board on the necessity for taking measures to ensure a rapid establishment of new factories, specially in the United Provinces and Bihar, and to their hope that Indian factory production would be raised to 4 to 5 hundred thousand tons. They looked upon a figure of nine hundred thousand tons only as a remote possibility. What has been the actual progress made? The figures tell the tale.

Year.	No. of factories.	Amount of sugar produced in factories.	Amount of sugar imported.
		Tons.	Tons.
1929-30 . . .	26	89,768	939,600
1930-31 . . .	29	119,859	901,200
1931-32 . . .	32	158,581	516,100
1932-33 . . .	57	290,177	369,500
1933-34 . . .	112	453,965	261,300
1934-35 . . .	130	578,115	229,900
1935-36 . . .	139	912,100	201,200
1936-37 (Estimate) . .	146	1,100,000	20,075

We propose to offer no comments. The figures are eloquent testimony of the success of the policy of protection. It is complained that the Central Government has lost a large revenue which it derived from import duties on foreign sugar. When it entered on a considered policy of protection, it must have made up its mind to suffer the loss in view of the larger national interests involved. The measure of the loss in revenue is the measure of the effectiveness of the protection. Let us consider this point in somewhat more detail, particularly as pointed attention is drawn to it in paragraph (*b*) of the Government of India's terms of reference framed for the Tariff Board.

Loss of Government Revenue.—The first point to ascertain in this connection is the exact amount of the loss in import duties. Here are the figures from a period of ten years anterior to 1930-31.

Year.	Revenue from Import duty on sugar in lakhs of rupees.	Rate of duty.
1920-21 . . .	1,85	10 per cent. *ad valorem.*
1921-22 . . .	4,12	15 ,, ,,
1922-23 . . .	4,87	25 ,, ,,
1923-24 . . .	4,86	10 ,, ,,
1924-25 . . .	5,78	10 ,, ,,
1925-26 . . .	6,59	Rs. 4-8 per cwt.
1926-27 . . .	7,44	,, 4-8 ,,
1927-28 . . .	6,53	,, 4-8 ,,
1928-29 . . .	7,82	,, 4-8 ,,
1929-30 . . .	8,46	,, 4-8 ,,
1930-31 . . .	10,81	,, 6-0 ,,
1931-32 . . .	6,19	,, 6-0 ,,
1932-33 . . .	6,84	,, 9-1 ,,
1933-34 . . .	4,72	,, 9-1 ,,
1934-35 . . .	3,81	,, 9-1 ,,
1935-36 . . .	3,24	,, 9-1 ,,
1936-37 . . .	51	,, 9-1 ,,

When the Rs. 6 rate came in, Indian sugar was at the half way to protection. Perhaps an average of the five years when the 4½ Rs. rate was in force would be a fair average to take. That gives 7,37 lakhs.

On the credit side, however, there are certain items of revenue which would not have accrued but for the policy of protection. These are:—

(1) Proceeds of the excise duty on sugar. These amounted in 1934-35 to 97 lakhs, in 1935-36 to 1,58 lakhs and in 1936-37 to 2,53 lakhs. These were derived from the old rate of duty. It is too early yet to say what the new rate will bring in. It has already had harmful effects on the growers. The ultimate repercussions on the revenues of the Local and the Central Governments remain to be seen.

(2) Income-tax paid by sugar factories.

This amounted to 17 lakhs in 1933-34, to 16 lakhs in 1934-35 and to 28 lakhs in 1935-36.

(3) Income-tax paid by employees of factories.

(4) Import duties on sugar machinery imported from abroad.

This source however is bound to dry up.

(5) Receipts by railways from transportation of cane and sugar.

(6) The amount of land revenue saved to provincial Governments during the depression by reason of cane cultivation.

It is difficult to estimate this in money.

(7) The amount of customs duty on cloth and other sundries imported for the use of agriculturists and factory-workers who, but for the factory Industry would not have had the means to buy them.

This cannot be calculated, but it is not an item to be left out of consideration as it is now a common place of Indian economics, that if import trade into India is to increase, the purchasing power of the masses should be enhanced.

But after all it is to take a narrow view of the question to treat the Government's revenues as something apart from the prosperity of the people of the country. This leads to the consideration of what the sugar industry under protection has done from the broad national point of view.

What has the sugar industry done for the country apart from the benefits to the cane-grower?—Under the last heading we gave a table showing the revenue which Government used to get from import duties on sugar which hereafter is bound to be eliminated unless of course there is a complete reversal of official policy in the matter of protection. Let us now look at figures showing what India used to pay for its sugar to foreign countries, principally Java:—

Year.	Value of foreign sugar imported into India, in lakhs of rupees.
1920-21	18,50
1921-22	27,50
1922-23	15,49
1923-24	15,45
1924-25	20,90
1925-26	15,20
1926-27	18,36
1927-28	14,50
1928-29	15,86

Year.	Value of foreign sugar imported, into India in lakhs of rupees.
1929-30	15,51
1930-31	10,54
1931-32	6,01
1932-33	4,12
1933-34	2,70
1934-35	2,11
1935-36	1,91
1936-37	24

Page 53 of the Report.—The result anticipated by the last Tariff Board has come to pass. In the ten years from 1920-21 on an average India remitted annually a sum of Rs. 17,72 lakhs to foreign countries for its sugar. The money now remains in the country to fructify in the pockets of the people themselves.

Here it may be objected that the money does not go to the people but to the "bloated capitalist". Even if this were true, from the country's point of view it is desirable that if it remains in the pocket of the capitalist, that capitalist should be Indian capitalist and not the Dutch capitalist of Java. The money is more likely to be spent to India's benefit in the former case. But it is not true that the money all goes to the capitalist. An official calculation made in 1934-35 showed that of the Rs. 12,50 lakhs which Indian Sugar brought in to the factories, 6,00 lakhs went to the cane grower, 2,50 lakhs were expended on wages and on salaries and 1,20 lakhs were paid to the transport agencies, railway, river steamer, motor lorries and bullock carts.

Page 52 of the Report. Answer in the Council of State on 16th February, 1937.—The sugar Industry has provided employment both for the rural labourer and the educated townsman. This was a point to which the last Tariff Board attached importance. The average daily number of workers employed in British India was over 71,000.

Burden on the Consumer.—The familiar objection to all protective duties that they raise the price of the protected commodity to the consumer does not apply in the case of sugar. Owing to the severe internal competition, the price of sugar to-day in India is lower than ever before. From an average price of Rs. 10-15-6 in 1928-29 it has fallen approximately to Rs. 6.

If protection had not been given?—It is one of the economic arguments against protection that it diverts the country from a business or occupation which it is fit for to one for which naturally it is not suitable. It may be (and has been) urged that India would have been better off if she had continued to import the bulk of her sugar from Java and the labour and capital employed in producing sugarcane in the field and sugar in the factory had been diverted to more profitable channels. This argument is purely academical and ignores the realities of the situation. The case of cane sugar in India is not parallel to that of beet sugar in England. India is peculiarly fitted for producing cane both by soil and climate. In fact it is the ancient home of the sugarcane. The raw sugar industry (*i.e.*, gur making) is indigenous to the country. Only with the rise of the white sugar industry in the world and the spread of a taste for white sugar in India it was found that both for the grower and the manufacturer, it was more profitable to utilise the cane for making sugar and not gur.

Without protection not only would the limited factory industry that existed in India prior to 1930 have suffered, but the cane grower also would have been suppressed by imported foreign sugar. That was the condition when the Government of India referred the case to the Imperial Council of Agricultural Research in 1929 for recommending urgent measures to save the industry.

It must also be remembered that sugarcane is different from other Indian primary products. Cotton, jute, oil seeds all enjoy overseas markets which help to raise their prices. But sugarcane is a perishable commodity and if there were no factory industry in India itself, its price is bound to fall disastrously.

Can the sugar industry stand on its own legs after 31st March, 1946?—The answer to this question depends on two factors, namely,

(1) The efficiency in production of the raw material, meaning by this, the quality of the cane and its cost of production and (2) The efficiency in production of the finished product, meaning by this, the efficiency of the manufacture of sugar and its cost of production.

So far as the manufacturing side goes, we append herewith the following statements in respect of a certain number of factories selected at random:—

(1) Statements of comparative cost of production per maund for the years 1932-33, 1933-34, 1934-35, 1935-36, and 1936-37, showing separately:—

(*a*) Cost of raw material.
(*b*) Manufacturing cost.
(*c*) Overhead charges.
(*d*) Total cost of production per maund comprising (*a*), (*b*) and (*c*).

(2) Statements of comparative mill efficiency including the figures for mill extraction, boiling house extraction and overall recovery during the years 1932-33, 1933-34, 1934-35, 1935-36 and 1936-37.

These figures speak for themselves. They show that there has been a steady increase in manufacturing efficiency and a steady decrease in manufacturing costs.

Successive annual reviews of the Director of the Imperial Institute of Sugar Technology are to the same effect. We shall not tire the patience of the Board by quoting all of them, but shall be content with two extracts from the last one (1935-36):—

> "The highest recovery for the season was 11·34 per cent. as against 11·10 per cent. during the preceding season. The average extraction for the whole of India shows a very substantial increase, the figure being 9·29 per cent. for 1935-36 as against 8·66 per cent. for 1934-35. Out of the 137 factories working in India, 68 had recoveries of 9 per cent. and over and 119 of 8 per cent. and over. In Bombay the majority of factories had recoveries of over 10 per cent. The majority of factories in the United Provinces had recoveries of 9 per cent. and over. In Bihar the majority of factories had recoveries of 8·5 per cent. and over."
>
> "It is satisfactory to note that there is a definite improvement in the quality of sugar being produced this year, as past experience has shown that high grade sugars are not only sold and taken delivery of more readily, but also are less liable to deterioration during storage. Several Indian factories are already producing sugars which compare favourably with the best imported grades."

The steady improvement in factory efficiency is perceivable all round, for instance, as regards the method in which factories handle gate cane.

When critics talk about the quick growth in a few years of a large factory industry and of the congestion of factories in the United Provinces and Bihar, they are not aware that the Tariff Board of 1930-31 deliberately contemplated "a rapid establishment of new factories" and that in these very provinces.

Pages 64, 65 and 68 of the Report.—The last Tariff Board stated that at the end of the protective period (of 15 years) improved factory efficiency should result in a recovery of 9·4 per cent. " a figure not far short of Java practice allowing for the difference in the sucrose content of cane ". On the factory side in less than half the period we are approaching the figure mentioned by the Tariff Board. The answer to the question put at the heading therefore depends on the first factor, the efficiency in agricultural production. The cost of cane is the biggest item in the sugar bill. The Tariff Board said " The sucrose content of the Java cane is much higher than in India, varying between 13 and 14 per cent. as compared with an average sucrose content of about 11·5 per cent. in Northern India "

Rate of protection for the period 1st April, 1938 to 31st March, 1946.—The cost of production of sugar per ton in Mysore is put as follows:—

	Rs.
Cane	108·75
Other raw materials	4·70
Labour	8·10
Power and fuel	5·75
Supervision and Head Office	8·10
Current repairs	3·70
Packing	4·40
Miscellaneous	2·75
Total	146-4-0
Depreciation and Interest	15-1-6
	161-5-5

Allowing Rs. 20 per ton as profit and adding the excise duty of Rs. 40 the fair selling price would be Rs. 221-5-6 *ex*-factory or Rs. 236 at the nearest port, Madras.

The cost of production at Nellikuppam comes to about Rs. 214 a ton excluding profits.

Similar remarks apply to western India where the cost of cane is as high as in Southern India.

So far as these two tracts of the country are concerned, it will be necessary to maintain the present level of protection if the grower and the manufacturer are to receive a fair reward for their labour.

Even in Northern India where the cost of cane is less, there is a remarkable unanimity of opinion amongst our members that while there is no case, in view of internal prices of sugar, for a higher duty, the present rate of protection should be maintained. Doubtless there is now a considerable margin between Java prices and Indian prices. But world conditions are now so uncertain that it is difficult to say when the position may not be upset. In view of internal competition the consumer is not liable to suffer but if factories combine and raise prices unfairly, there are obvious remedies.

A minor argument is that there are always a certain number of people who will insist on having Java sugar and there is no reason why Government should forego its present revenue from them.

Other forms of assistance.—The other forms of assistance necessary for the development of the industry are:—

(1) Intensive research in cane agriculture with a view to improve the quality of the cane and reduce the cost of production,

(2) Immediate action to control sugarcane pests and diseases (see answer to question 15).

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(3) Legislation to make a mixture of absolute alcohol with motor spirit compulsory as in several other sugar producing countries. The outlet provided by the Indian Molasses Company covers only a portion of the production. Southern and Western India are not touched nor any part of Northern India, west of Cawnpore. Further the price of 1 anna 5 pies offered by the Company is absurdly low. The last Tariff Board estimated a return of Rs. 1-8 per maund (see answer to question 106).

(4) Facilities for export of sugar by admission of Indian sugar into the United Kingdom at colonial preference rates (see answer to question 104).

(5) When a scheme has been formulated for a central sales organisation and approved by the industry, it may be necessary to get statutory sanction for it. In such a case we should ask for the sympathetic assistance of Government.

(6) Legislation prescribing licensing of new factories and extensions of existing factories. See answer to question 24 (*b*).

STATEMENT No. I.*

Questions Nos. 108, 109 and 110.

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* Confidential. Not printed.

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STATEMENT No. II.

Questions Nos. 108, 109 and 110.

EFFICIENCY FIGURES.

No. 140. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	9·79	10·42
2. Yield per cent. cane	6·90	7·77
3. Molasses per cent. cane	4·26	3·93
4. Press cake per cent. cane	1·59	2·21
5. Mixed juice per cent. cane	85·98	84·94
6. Mill extraction	86·68	88·84
7. Boiling house extraction	80·91	83·68
8. Overall recovery per cent. sugar in cane	70·13	74·33
9. Purity of mixed juice	74·04	76·70
10. Purity of molasses	32·00	33·52
11. Sugar per cent. press cake	3·84	6·24
12. Molasses loss per cent. sugar in juice	15·37	13·02
13. Filter process loss per cent. sugar in juice	0·72	1·49
14. Unknown loss per cent. sugar in juice	3·00	1·81
15. Unknown loss per cent. sugar in cane	2·60	1·61
To add :—		
Coal per cent. cane	5·87	4·45
Firewood per cent. cane	2·15	0·74
Total days actual crushing	86	77
Total cane milled (maunds)	915,500	841,732
Sugar per cent. bagasse	3·36	3·14

STATEMENT No. II—*contd.*

No. 50. Clarification process used—Double Sulphitation.

—	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	No data	No data	No data	No data	11·24	11·73	12·27
2. Yield per cent. cane	7·978	8·106	7·946	8·64	8·47	8·893	9·492
3. Molasses per cent. cane	No data	No data	No data	3·26	4·03	3·73	3·36
4. Press cake per cent. cane	Do.	Do.	Do.	No data	1·89	1·62	1·83
5. Mixed juice per cent. cane	Do.	Do.	Do.	Do.	86·30	83·48	86·35
6. Mill extraction	Do.	Do.	Do.	Do.	88·37	88·10	88·24
7. Boiling house extraction	Do.	Do.	Do.	Do.	84·87	85·70	87·30
8. Overall recovery	Do.	Do.	Do.	Do.	75·02	75·51	77·03
9. Purity of mixed Juice	Do.	Do.	Do.	Do.	78·94	81·93	82·79
10. Purity of molasses	Do.	Do.	Do.	Do.	35·11	35·51	35·93
11. Sugar per cent. press cake	Do.	Do.	Do.	Do.	5·40	5·56	4·80
12. Molasses loss per cent. sugar in juice	Do.	Do.	Do.	Do.	12·42	12·49	10·85
13. Filter process loss per cent. sugar in juice	Do.	Do.	Do.	Do.	1·03	0·87	0·81
14. Unknown loss per cent. sugar in juice	Do.	Do.	Do.	Do.	1·66	0·94	1·04
15. Unknown loss per cent. sugar in cane	Do.	Do.	Do.	Do.	1·47	0·83	0·92
16. Coal per cent. cane	Do.	Do.	Do.	Do.	No data	0·419	0·337
17. Firewood per cent. cane	Do.	Do.	Do.	Do.	Do.	5·26	5·80
18. Total days actual crushing	Do.	Do.	Do.	Do.	59	109	91
19. Total cane milled (maunds)	881,893-0	1,884,793-30	2,187,408-0	1,880,470-30	1,046,282-30	2,007,634-10	1,623,947-20
20. Sugar per cent. bagasse	No data	No data	No data	No data	4·30	4·08	4·23

STATEMENT No. II—*contd.*

No. 4. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	10·53	10·23
2. Yield per cent. cane	8·40	7·72
3. Molasses per cent. cane	4·25	4·47
4. Press cake per cent. cane	1·9	2·0
5. Mixed juice per cent. cane	87·7	81·7
6. Mill extraction	91·68	88·55
7. Boiling house extraction	85·24	83·85
8. Overall recovery	78·18	74·24
9. Purity of mixed juice	72·71	72·34
10. Purity of molasses	29·43	31·05
11. Sugar per cent. press cake	4·17	3·51
12. Molasses loss per cent. sugar in juice	12·16	14·09
13. Filter process loss per cent. sugar in juice	·82	·78
14. Unknown loss per cent. sugar in juice	1·78	1·28
15. Unknown loss per cent. sugar in cane	1·66	1·13
16. Coal per cent. cane	1·18	0·85
17. Firewood per cent. cane	11·22	5·23
18. Total days actual crushing	149	141
19. Total cane milled (maunds)	508,361	595,685
20. Sugar per cent. bagasse	3·48	4·04

No. 85. Clarification process used—Sulphitation.

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—	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	11·51	11·83	12·63
2. Yield per cent. cane	8·48	9·647	10·365
3. Molasses per cent. cane	4·51	3·15	3·01
4. Press cake per cent. cane	No data	1·48	1·89
5. Mixed juice per cent. cane	79·71	88·59	87·38
6. Mill extraction	No data	90·03	90·74
7. Boiling house extraction	do.	89·84	89·78
8. Overall recovery	72·92	80·89	81·45
9. Purity of mixed juice	No data	79·98	82·87 (G.P.)
10. Purity of molasses	36·70	32·87	34·47 (G.P.)
11. Sugar per cent. press cake	No data	No data	4·84
12. Molasses loss per cent. sugar in juice	do.	9·02	8·70
13. Filter process loss per cent. sugar in juice	do.	No data	·80
14. Unknown loss per cent. sugar in juice	do.	do.	·72
15. Unknown loss per cent. sugar in cane	do.	do.	·65
16. Coal per cent. cane	0·98	0·29	0·09
17. Firewood per cent. cane	4·62	0·63	0·09
18. Total days actual crushing	No data	140	126
19. Total cane milled (maunds)	1,464,820	2,353,415	2,196,359
20. Sugar per cent. bagasse	4·02	3·59	3·65

STATEMENT No. II—*contd.*

No. 51. Clarification process used—Double Sulphitation.

——	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	11·79	11·70	12·27
2. Yield per cent. cane	9·06	9·335	10·027
3. Molasses per cent. cane	3·44	3·348	3·489
4. Press cake per cent. cane	No data	1·68	2·67
5. Mixed juice per cent. cane	81·58	81·67	89·16
6. Mill extraction	No data	89·12	91·98
7. Boiling house extraction	do.	88·08	88·51
8. Overall recovery	76·52	79·38	81·41
9. Purity of mixed juice	81·38	81·09	82·31
10. Purity of molasses	35·58	33·61	33·20
11. Sugar per cent. press cake	No data	3·28	2·16
12. Molasses loss per cent. sugar in juice	do.	No data	No data
13. Filter process loss per cent. sugar in juice	do.	·52	0·51
14. Unknown loss per cent. sugar in juice	do.	No data	No data
15. Unknown loss per cent. sugar in cane	do.	do.	do.
16. Coal per cent. cane	do.	0·788	0·857
17. Firewood per cent. cane	do.	0·372	0·148
18. Total days actual crushing	do.	No data	No data
19. Total cane milled (maunds)	1,971,830-20	2,880,062-20	2,512,862-20
20. Sugar per cent. bagasse	No data	3·38	2·16

No. 138. Clarification process used—Double Sulphitation.

——	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	13·36	12·03	13·27
2. Yield per cent. cane	10·44	9·36	10·829
3. Molasses per cent. cane	2·74	3·09	3·07
4. Press cake per cent. cane	No record	1·72	1·66
5. Mixed juice per cent. cane	do.	78·50	83·00
6. Mill extraction	do.	86·14	90·59
7. Boiling house extraction	do.	90·01	89·73
8. Overall recovery	77-87	77·54	81·28
9. Purity of mixed juice	No data	81·75	85·70
10. Purity of molasses	do.	35·60	33·70
11. Sugar per cent. press cake	do.	8·2	6·35
12. Molasses loss per cent. sugar in juice	do.	9·12	7·65
13. Filter process loss per cent. sugar in juice	do.	1·36	·88
14. Unknown loss per cent. sugar in juice	do.	Wrong data	1·74
15. Unknown loss per cent. sugar in cane	do.	do.	1·58
16. Coal per cent. cane	3·44	1·44	·16
17. Firewood per cent. cane	6·41	2·52	·664
18. Total days actual crushing	62	129	122
19. Total cane milled (maunds)	220,708-32	461,513-3	518,256
20. Sugar per cent. bagasse	No data	4·45	8·92

STATEMENT No. II—*contd.*

No. 109. Clarification process used—Sulphitation.

——	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	7·84	10·81	11·92
2. Yield per cent. cane	5·45	8·312	9·493
3. Molasses per cent. cane	5·30	3·86	3·54
4. Press cake per cent. cane	2·23	3·33	3·06
5. Mixed juice per cent. cane	82·69	85·00	83·13
6. Mill extraction	91·03	90·74	91·22
7. Boiling house extraction	75·60	84·14	86·78
8. Overall recovery	68·82	76·35	79·16
9. Purity of mixed juice	69·59	76·37	79·03
10. Purity of molasses	33·88	34·06	34·28
11. Sugar per cent. press cake	3·17	3·62	4·07
12. Molasses loss per cent. sugar in juice	22·55	12·81	9·81
13. Filter process loss per cent. sugar in juice	0·99	1·23	1·15
14. Unknown loss per cent. sugar in juice	0·86	1·82	2·95
15. Unknown loss per cent. sugar in cane	0·78	1·31	2·69
16. Coal per cent. cane	3·46	2·48	0·319
17. Firewood per cent. cane	0·488	0·105	0·319
18. Total days actual crushing	32·17	99	143
19. Total cane milled (maunds)	732,157-24	2,525,839-35	3,750,785-12
20. Sugar per cent. bagasse	2·79	3·28	3·41

STATEMENT No. II—*contd.*

No. 19. Clarification process used—Sulphitation.

	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	12·15	12·02	12·13	10·46	10·68	11·12	11·64
2. Yield per cent. cane	8·21	8·69	8·52	7·16	8·02	8·24	8·52
3. Molasses per cent. cane	3·60	3·71	4·75	3·99	3·75	4·51	4·37
4. Press cake per cent. cane	3·66	2·88	2·42	2·45	3·18	3·29	1·56
5. Mixed juice per cent. cane	79·33	81·03	76·12	74·77	84·83	86·73	83·44
6. Mill extraction.	88·41	89·95	86·28	84·43	89·39	91·09	90·46
7. Boiling house extraction	75·88	79·32	83·50	80·34	83·28	80·69	80·48
8. Overall recovery	67·08	71·36	69·45	67·82	74·44	73·50	72·81
9. Purity of mixed juice	83·37	81·79	79·43	77·35	80·36	79·67	77·66
10. Purity of molasses	38·11	36·79	39·68	37·07	38·21	38·18	36·78
11. Sugar per cent. press cake	8·23	6·02	8·70	3·40	3·93	2·77	4·33
12. Molasses loss per cent. sugar in juice	12·49	12·36	17·29	16·10	14·89	16·90	11·47
13. Filter press loss per cent. sugar in juice	2·80	1·60	2·01	0·94	1·31	0·90	·64
14. Unknown loss per cent. sugar in juice	8·83	6·72	..	2·62	0·52	2·51	3·41
15. Unknown loss per cent. sugar in cane	7·81	6·05	..	2·21	·47	2·20	3·09
16. Coal per cent. cane	31·24	31·16	37·01	41·99	33·59	31·30	34·64
17. Firewood per cent. cane	3·66	2·88	2·42	2·45	3·18	3·29	1·56
18. Total days actual crushing	79	121	143	99	104	128	149
19. Total cane milled (maunds)	485,698·20	916,279	1,384,325	976,436	946,686	1,170,847·20	1,603,533·10
20. Sugar per cent. bagasse	4·52	3·86	4·51	3·82	3·39	3·19	3·19

Purities are P. G. P.
Mixed juice calculated.

STATEMENT No. II—*contd.*

No. 107. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·482	12·11
2. Yield per cent. cane	8·863	9·682
3. Molasses per cent. cane	3·705	3·40
4. Press cake per cent. cane	2·68	2·65
5. Mixed juice per cent. cane	83·72	87·55
6. Mill extraction	90·72	89·50
7. Boiling house extraction	86·72	88·90
8. Overall recovery	76·88	79·56
9. Purity of mixed juice	78·828	81·07
10. Purity of molasses	29·323	30·77
11. Sugar per cent. press cake	6·421	6·28
12. Molasses loss per cent. sugar in juice	10·64	9·50
13. Filter process loss per cent. sugar in juice	1·69	1·54
14. Unknown loss per cent. sugar in juice	·95	·06
15. Unknown loss per cent. sugar in cane	·84	·05
16. Coal per cent. cane	0·504	0·18
17. Firewood per cent. cane	1·015	0·64
18. Total days actual crushing	No data	No data
19. Total cane milled (maunds)	2,051,150	2,339,370
20. Sugar per cent. bagasse	4·046	3·92

No. 28. Clarification process used—Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	10·82	11·49	11·98	11·72
2. Yield per cent. cane	8·19	9·132	9·592	9·435
3. Molasses per cent. cane	No data	No data	No data	No data
4. Press cake per cent. cane	2·25	do.	2·60	2·22
5. Mixed Juice per cent. cane	77·78	82·58	86·68	84·61
6. Mill extraction	90·14	91·20	92·41	93·80
7. Boiling house extraction	83·56	86·70	86·40	85·57
8. Overall recovery	75·32	79·07	79·84	80·26
9. Purity of mixed juice	78·50	82·60	80·30	80·91
10. Purity of molasses	32·34	33·40	31·78	32·81
11. Sugar per cent. press cake	6·74	4·38	4·13	3·57
12. Molasses loss per cent. sugar in juice	No data	No data	No data	11·04
13. Filter process loss per cent. sugar in juice	1·56	do.	1·22	·72
14. Unknown loss per cent. sugar in juice	No data	do.	No data	2·67
15. Unknown loss per cent. sugar in cane	do.	do.	do.	2·50
16. Coal per cent. cane	2·8	3·2	·24	·62
17. Firewood per cent. cane	·1	·06	·04	0·4
18. Total days actual crushing	No data	No data	No data	No data
19. Sugar per cent. bagasse	3·27	3·30	2·79	2·71
20. Total cane milled (maunds)	1,808,904	1,800,664	2,506,357	3,117,845

STATEMENT No. II—*contd.*

No. 41. Clarification process used—Double Sulphitation.

—	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	11·416	12·247	12·282	12·23	11·81	12·35	12·00
2. Yield per cent. cane	8·51	9·567	9·094	9·325	9·02	9·70	9·43
3. Molasses per cent. cane	4·47	4·21	4·558	3·97	3·72	3·86	3·60
4. Press cake per cent. cane	2·05	2·31	2·317	2·14	2·16	2·64	2·27
5. Mixed juice per cent. cane	86·04	90·39	87·127	88·46	86·72	84·50	83·87
6. Mill extraction	88·37	93·83	90·86	92·06	92·04	91·56	90·16
7. Boiling house extraction	83·47	82·37	80·78	82·13	83·54	85·53	86·98
8. Overall Recovery	73·75	77·31	73·40	75·61	75·98	78·30	78·41
9. Purity of mixed juice	77·13	81·98	80·42	81·87	81·32	80·76	81·23
10. Purity of molasses	37·62	40·88	41·68	37·88	36·43	31·94	32·47
11. Sugar per cent. press cake	7·08	7·41	7·908	6·75	5·21	4·31	4·66
12. Molasses loss per cent. sugar in juice	15·08	13·80	15·58	12·82	12·06	10·64	11·36
13. Filter process loss per cent. sugar in juice	1·44	1·49	1·64	1·28	1·04	1·09	1·05
14. Unknown loss per cent. sugar in juice	·01	2·34	2·00	3·77	4·36	2·74	·61
15. Unknown loss per cent. sugar in cane	·01	2·20	1·90	3·47	4·01	2·51	·55
16. Coal per cent. cane	2·171	1·745	1·89	0·70	1·25	0·52	0·34
17. Firewood per cent. cane	0·012	0·062	0·093	0·25	0·21	9·20	0·019
18. Total days actual crushing	151	133	127	128	101	135	138
19. Total cane milled (maunds)	1,367,361	1,430,562	1,610,424-5	1,868,198-25	1,840,308-25	2,802,251-25	3,130,927
20. Sugar per cent. bagasse	3·482	2·814	3·236	3·25	3·55	3·35	3·47

STATEMENT No. II—*contd.*

No. 90. Clarification process used—Double Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane .	11·82	12·06	11·97	12·09
2. Yield per cent. cane .	8·80	9·27	9·28	9·50
3. Molasses per cent. cane .	4·04	3·99	4·19	3·61
4. Press cake per cent. cane .	2·25	2·38	2·35	2·12
5. Mixed Juice per cent. cane	82·20	85·41	87·62	85·82
6. Mill extraction . .	89·17	91·09	92·06	92·08
7. Boiling house extraction .	83·08	83·97	83·35	85·02
8. Overall recovery . .	74·08	76·49	76·74	78·29
9. Purity of mixed juice .	80·5	80·2	79·3	82·5
10. Purity of molasses . .	38·13	35·6	33·6	33·4
11. Sugar per cent. press cake	8·47	5·14	4·53	6·07
12. Molasses loss per cent. sugar in juice . .	13·02	12·08	12·60	10·51
13. Filter process loss per cent sugar in juice . . .	1·81	1·11	·97	1·16
14. Unknown loss per cent. sugar in juice . .	2·09	2·84	3·08	3·31
15. Unknown loss per cent. sugar in cane . .	1·86	2·58	2·84	3·04
16. Coal per cent. cane .	..	0·33	..	..
17. Firewood per cent. cane .	6·1	3·54	1·28	2·50
18. Total days actual crushing	..	131	171	136
19. Total cane milled (maunds)	2,195,831	3,269,471	5,614,307	4,466,479
20. Sugar per cent. bagasse .	3·93	3·76	3·09	3·16

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STATEMENT No. II—*contd.*

No. 80. Clarification process used—Sulphitation.

—	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	No data.	No data.	11·86	No data.	12·30
2. Yield per cent. cane	9·00	9·02	9·37	8·85	9·91
3. Molasses per cent cane.	No data.	No data.	3·48	No data.	3·00
4. Press cake per cent. cane	do.	do.	No data.	do.	2·00
5. Mixed juice per cent. cane	do.	do.	80·67	do.	93·41
6. Mill extraction	do.	do.	89·82	do.	90·35
7. Boiling house extraction	do.	do.	87·06	do.	88·84
8. Overall recovery	do.	do.	78·20	do.	80·26
9. Purity of mixed juice	do.	do.	82·10	do.	81·54
10. Purity of molasses	do.	do.	32·09	do.	35·34
11. Sugar per cent. press cake	do.	do.	2·33	do.	5·77
12. Molasses loss per cent. sugar in juice	do.	do.	No data.	do.	8·97
13. Filter process loss per cent. sugar in juice	do.	do.	do.	do.	1·04
14. Unknown loss per cent. sugar in juice	do.	do.	do.	do.	1·15
15. Unknown loss per cent. sugar in cane	do.	do.	do.	do.	1·04
16. Coal per cent. cane	3·42	1·71	1·77	0·83	1·24
17. Firewood per cent. cane	1·05	0·95	0·78	2·20	2·77
18. Total days actual crushing	No data	No data	No data	No data	103-8-20
19. Total cane milled (maunds)	875,798-10	1,790,024-0	1,616,516-30	4,901,426-10	4,128,161-10
20. Sugar per cent. bagasse	No data	No data	3·5	No data	3·2

STATEMENT No. II—*contd.*

No. 35. Clarification process used—Sulphitation.

	1935-36.
1. Sugar per cent. cane	11·12
2. Yield per cent. cane	8·05
3. Molasses per cent. cane	3·71
4. Press cake per cent. cane	2·00
5. Mixed juice per cent. cane	83·55
6. Mill extraction	86·36
7. Boiling house extraction	83·33
8. Overall recovery	71·96
9. Purity of mixed juice	86·85
10. Purity of molasses	33·03
11. Sugar per cent. press cake	2·98
12. Molasses loss per cent. sugar in juice	12·47
13. Filter process loss per cent. sugar in juice	·62
14. Unknown loss per cent. sugar in juice	3·58
15. Unknown loss per cent. sugar in cane	3·09
16. Coal per cent. cane	4·04
17. Firewood per cent. cane	0·41
18. Total days actual crushing	147
19. Total cane milled (maunds)	474,335
20. Sugar per cent. bagasse	4·61

No. 81. Clarification process used—Sulphitation.

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—	1935-36.	1936-37.
1. Sugar per cent. cane	11·61	11·87
2. Yield per cent. cane	9·76	10·12
3. Molasses per cent. cane	3·72	3·24
4. Press cake per cent. cane	1·91	1·85
5. Mixed juice per cent. cane	97·23	100·24
6. Mill extraction	94·40	95·61
7. Boiling house extraction	88·59	89·60
8. Overall recovery per cent. sugar in cane	83·64	84·92
9. Purity of mixed juice	80·27	81·84
10. Purity of molasses	29·08	31·81
11. Sugar per cent. press cake	5·52	5·60
12. Molasses loss per cent. sugar in juice	9·64	8·92
13. Filter process loss per cent. sugar in juice	·96	·93
14. Unknown loss per cent. sugar in juice	·79	·49
15. Unknown loss per cent. sugar in cane	·77	·47
16. Coal per cent. cane	*Nil*	*Nil*
17. Firewood per cent. cane	2·22	0·63
18. Total days actual crushing	145	123
19. Total cane milled (maunds)	2,681,934	2,483,040·5
20. Sugar per cent. bagasse	2·04	1·99

STATEMENT No. II—*contd.*

No. 55. Clarification Procees used—Double Sulphitation.

—	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	12·41	11·68	10·72	12·59	11·64	11·83	12·71
2. Yield per cent. cane	8·39	8·41	7·80	9·83	9·06	9·67	10·43
3. Molasses per cent. cane	4·37	3·65	3·62	4·14	3·22	3·69	3·44
4. Press Cake per cent. cane	2·44	2·26	3·46	3·93	1·99	2·42	2·70
5. Mixed Juice per cent. cane.	82·28	86·95	83·43	83·80	85·72	85·75	85·42
6. Mill Extraction.	88·74	92·64	90·99	90·90	90·51	92·21	92·02
7. Boiling House Extraction	75·60	77·43	79·32	85·21	85·29	88·39	88·96
8. Overall Recovery	67·08	71·73	72·18	77·47	77·20	81·51	81·87
9. Purity of Mixed Juice	80·31	78·80	77·59	81·16	82·15	80·81	83·53
10. Purity of Molasses	37·75	38·35	37·76	37·97	34·39	31·30	31·76
11. Sugar per cent. press cake	5·7	8·85	7·44	10·23	5·16	2·77	3·33
12. Molasses loss per cent. sugar in juice	13·86	12·15	12·16	12·51	9·85	10·05	8·92
13. Filter process loss per cent. sugar in juice . . .	1·26	1·85	2·64	3·51	0·97	0·62	0·77
14. Unknown loss per cent. sugar in juice	9·28	8·57	5·88	1·05	3·89	0·94	1·35
15. Unknown loss per cent. sugar in cane	8·22	7·94	5·35	0·95	3·52	0·87	1·24
16. Coal per cent. cane	0·55	0·69	0·77	0·87	0·7	0·20	0·01
17. Firewood per cent. cane	4·0	2·1	0·87	2·05	1·86	0·170	..
18. Total days actual crushing	129	124	128	97	88.	118	141
19. Total cane milled (mds.)	2,049,189	2,331,194	2,873,336	4,058,841	4,929,765	..	8,003,919
20. Sugar per cent. bagasse	3·46	3·25	3·41	3·93	3·80	3·10	3·27

Purities are P. G. P.
Mixed juice has been weighed.

STATEMENT No. II—*contd.*

No. 154. Clarification process used—Double Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	11·91	12·85	14·00	13·17
2. Yield per cent. cane	8·80	8·84	11·34	11·01
3. Molasses per cent. cane	No data.	4·27	3·53	3·10
4. Press cake per cent. cane	do.	No data.	2·59	1·70
5. Mixed juice per cent. cane	do.	75·28	82·64	85·575
6. Mill extraction	do.	81·74	89·84	92·98
7. Boiling house extraction	do.	83·75	89·28	88·92
8. Overall recovery	73·45	68·29	80·54	82·75
9. Purity of mixed juice	77·40	80·95	82·04	82·14
10. Purity of molasses	35·01	34·40	33·52	34·93
11. Sugar per cent. press cake	5·89	5·93	5·30	9·76
12. Molasses loss per cent. sugar in juice	No data.	12·64	8·98	4·69
13. Filter process loss per cent. sugar in juice	Do.	No data	1·49	1·36
14. Unknown loss per cent. sugar in juice	Do.	Do.	·25	1·03
15. Unknown loss per cent. sugar in cane	Do.	Do.	·23	·96
16. Coal per cent. cane	3·62	3·70	2·756	0·80
17. Firewood per cent. cane	9·23	9·90	4·766	3·85
18. Total days actual crushing	No data	60	138	159½
19. Total cane milled (maunds)	204,136	222,882	1,301,084	2,060,475
20. Sugar per cent. bagasse	6·20	6·19	4·10	3·20

No. 126. Clarification process used—Double Carbonatation.

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—	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	Wrong	10·57	10·40
2. Yield per cent. cane	8·14	7·86	8·37
3. Molasses per cent. cane	4·15	4·70	2·81
4. Press cake per cent. cane	No data	No data	5·68
5. Mixed juice per cent. cane	88·30	79·80	79·23
6. Mill extraction	No data	88·94	88·76
7. Boiling house extraction	do.	83·14	90·33
8. Overall recovery	do.	73·77	80·17
9. Purity of mixed juice	64·97	68·28	70·45
10. Purity of molasses	30·33	29·40	30·19
11. Sugar per cent. press cake	0·44	0·56	0·19
12. Molasses loss per cent. sugar in juice	No data	14·35	9·02
13. Filter process loss per cent. sugar in juice	do.	No data	0·12
14. Unknown loss per cent. sugar in juice	do.	do.	0·53
15. Unknown loss per cent. sugar in cane	do	do.	0·47
16. Coal per cent. cane	4·10	0·32	0·272
17. Firewood per cent. cane	0·46	0·05	*Nil*
18. Total days actual crushing	60	110	131
19. Total cane milled (maunds)	602,164-18	1,387,929	2,146,775
20. Sugar per cent. bagasse	3·70	3·60	3·32

STATEMENT No. II—*contd.*

No. 1. Clarification process used—Double Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane .	12·61	11·27	11·23	11·19
2. Yield per cent. cane .	8·85	8·45	8·27	8·99
3. Molasses per cent. cane .	4·19	4·68	4·98	3·78
4. Press cake per cent. cane .	No data.	2·50	2·49	1·97
5. Mixed juice per cent. cane	88·33	85·89	79·89	80·98
6. Mill extraction . .	89·86	91·39	89·25	91·24
7. Boiling house extraction.	77·47	81·41	81·72	87·62
8. Overall recovery . .	69·61	74·40	72·95	79·95
9. Purity of mixed juice	80·49	79·08	77·11	81·67
10. Purity of molasses . .	34·90	36·13	56·09	33·00
11. Sugar per cent. press cake.	6·56	4·32	4·65	4·18
12. Molasses loss per cent. sugar in juice.	11·31	15·10	15·82	11·04
13. Filter process loss per cent. sugar in juice.	No data.	1·05	1·15	·81
14. Unknown loss per cent. sugar in juice.	do.	2·44	1·31	·53
15. Unknown loss per cent. sugar in cane.	do.	2·23	1·17	·48
16. Coal per cent. cane. .	..	..	..	..
17. Firewood per cent. cane .	..	..	..	..
18. Total days actual crushing	73	87	128	91
19. Total cane milled (maunds)	1,049,697	1,603,087·20	3,372,050	2,454,691
20. Sugar per cent. bagasse .	3·59	3·52	3·64	3·01

No. 104. Clarification process used—Carbonatation.

—	1934-35.	1935-36.	1936-37. Up to 31st May.
1. Sugar per cent. cane	10·80	11·81	12·37
2. Yield per cent. cane.	8·00	8·691	9·537
3. Molasses per cent. cane . . .	3·83	4·71	3·83
4. Press cake per cent. cane . . .	7·39	9·32	6·46
5. Mixed juice per cent. cane . . .	86·40	86·74	84·41
6. Mill extraction	92·90	91·79	90·67
7. Boiling house extraction . . .	79·18	79·60	84·41
8. Overall recovery	73·55	73·09	76·54
9. Purity of mixed juice	75·70	75·39	79·09
10. Purity of molasses	33·93	34·67	36·05
11. Sugar per cent. press cake . . .	2·43	2·03	2·93
12. Molasses loss per cent. sugar in juice .	12·21	13·96	13·45
13. Filter process loss per cent. sugar in juice	1·79	1·75	1·820
14. Unknown loss per cent. sugar in juice .	6·82	4·69	0·32
15. Unknown loss per cent. sugar in cane .	6·34	4·31	0·29
16. Coal per cent. cane	8·48	8·323	5·732
17. Firewood per cent. cane . . .	..	..	..
18. Total days actual crushing . . .	145	166	200
19. Total cane milled (maunds). . .	1,119,755	1,519,811	2,085,001
20. Sugar per cent. bagasse . . .	2·94	3·69	4·22

Figures for 1936-37 are not the final figures as the factory is still running.

STATEMENT No. II—*contd.*

No. 96. Clarification process used—Double Sulphitation.

—	1934-35.	1935-36.	1936-37
1. Sugar per cent. cane	11·60	11·76	11·99
2. Yield per cent. cane	9·18	9·48	9·65
3. Molasses per cent. cane	3·45	3·96	3·30
4. Press cake per cent. cane	3·04	3·01	2·32
5. Mixed juice per cent. cane	91·67	92·01	86·05
6. Mill extraction	91·66	92·32	91·66
7. Boiling house extraction	86·06	86·58	87·50
8. Overall recovery	78·89	79·93	80·24
9. Purity of mixed juice	80·56	78·61	80·77
10. Purity of molasses	32·38	31·36	31·56
11. Sugar per cent. press cake	5·01	5·20	3·70
12. Molasses loss per cent. sugar in juice	9·83	10·66	9·00
13. Filter process loss per cent. sugar in juice	1·43	1·44	0·78
14. Unknown loss per cent. sugar in juice	2·68	1·32	2·68
15. Unknown loss per cent. sugar in cane	2·46	1·26	2·50
16. Coal per cent. cane	0·995	0·125	0·10
17. Firewood per cent. cane	0·549	0·31	0·07
18. Total days actual crushing	126	138	138
19. Total cane milled (maunds)	3,500,520	4,397,770	4,509,987
20. Sugar per cent. bagasse	3·07	2·89	2·25

No. 137. Clarification process used—Double Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	No data	No data	10·89	11·60
2. Yield per cent. cane	5·00	8·18	7·11	11·60
3. Molasses per cent. cane	3·10	No data	4·50	3·30
4. Press cake per cent. cane	No. data	do.	3·70	3·00
5. Mixed juice per cent. cane	do.	72·00	71·80	70·50
6. Mill extraction	do.	No data	85·45	87·52
7. Boiling house extraction	do.	73·24	75·97	79·32
8. Overall recovery	do.	No data	64·91	69·33
9. Purity of mixed juice	81·90	85·50	79·90	85·20
10. Purity of molasses	No data	No data	35·07	39·09
11. Sugar per cent. press cake	do.	do.	7·80	7·25
12. Molasses loss per cent. sugar in juice	do.	do.	15·06	12·02
13. Filter process loss per cent. sugar in juice	do.	do.	3·03	2·05
14. Unknown loss per cent. sugar in juice	do.	do.	5·94	6·45
15. Unknown loss per cent. sugar in cane	do.	do.	5·08	5·65
16. Coal per cent. cane	26·5	do.	12·6	14·2
17. Firewood per cent. cane	..	do.	0·27	0·26
18. Total days actual crushing	50	74	127	118
19. Total cane milled (maunds)	37,728·6	75,945	140,117·25	153,153
20. Sugar per cent. bagasse	No data	No data	5·51	5·68

STATEMENT No. II—*contd.*

No. 130. Clarification process used—Double Sulphitation.

——	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	No data.	9·89	11·05	11·63
2. Yield per cent. cane	9·60	7·12	9·06	9·45
3. Molasses per cent. cane	3·63	3·05	3·26	3·28
4. Press cake per cent. cane	3·04	2·14	2·03	2·51
5. Mixed juice per cent. cane	85·22	81·49	85·34	84·61
6. Mill extraction	No data.	81·66	91·11	91·09
7. Boiling house extraction	do.	87·54	89·33	88·84
8. Overall recovery	do.	71·48	81·39	80·93
9. Purity of mixed juice	do.	72·31	75·50	79·04
10. Purity of molasses	do.	31·70	30·95	32·11
11. Sugar per cent. press cake	do.	3·70	3·48	2·79
12. Molasses loss per cent. sugar in juice	do.	11·64	9·90	9·92
13. Filter process loss per cent. sugar in juice	do.	·98	·60	·66
14. Unknown loss per cent. sugar in juice	do.	Doubtful data.	·08	·58
15. Unknown loss per cent. sugar in cane	do.	do.	·07	·53
16. Coal per cent. cane	do.	1·90	0·10	0·10
17. Firewood per cent. cane	do.	0·88	0·18	0·01
18. Total days actual crushing	do.	118	128	137
19. Total cane milled (maunds)	892,724	1,921,694	2,692,560	3,417,894
20. Sugar per cent. bagasse	No data.	3·09	2·93	3·03

No. 149. Clarification process used—Double Sulphitation.

——	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	13·80	13·00	13·30	13·40
2. Yield per cent. cane	10·35	9·93	10·50	10·10
3. Molasses per cent. cane	4·40	3·95	3·60	4·15
4. Press cake per cent. cane	No record.	2·40	1·34	1·75
5. Mixed juice per cent. cane	85·70	85·30	88·00	89·60
6. Mill extraction	90·67	85·96	91·31	90·26
7. Boiling house extraction	82·37	Wrong.	86·12	83·18
8. Overall recovery	74·69	76·08	78·63	75·08
9. Purity of mixed juice	82·02	83·00	85·40	86·30
10. Purity of molasses	46·80	38·30	33·10	34·70
11. Sugar per cent. press cake	No data.	7·30	3·40	8·60
12. Molasses loss per cent. sugar in juice	14·28	12·84	10·31	11·29
13. Filter process loss per cent. sugar in juice	No data.	1·57	·93	1·25
14. Unknown loss per cent. sugar in juice	do.	Wrong data.	2·64	4·33
15. Unknown loss per cent. sugar in cane	do.	do.	2·41	3·91
16. Coal per cent. cane	..	..	..	..
17. Firewood per cent. cane	..	6·52	6·30	8·05
18. Total days actual crushing	190	191	264	159
19. Total cane milled (maunds)	1,479,000	2,177,300	6,105,300	3,539,000
20. Sugar per cent. bagasse	3·78	3·67	4·45	4·85

STATEMENT No. II—*contd.*

No. 36. Clarification process used—Double Sulphitation.

——	1935-36.	1936-37.
1. Sugar per cent. cane	11·94	11·84
2. Yield per cent. cane	9·14	8·98
3. Molasses per cent. cane	4·04	4·21
4. Press cake per cent. cane	3·55	3·01
5. Mixed juice per cent. cane	89·23	84·69
6. Mill extraction	92·60	91·85
7. Boiling house extraction	82·33	82·24
8. Overall recovery	76·25	75·64
9. Purity of mixed juice	77·24	78·86
10. Purity of molasses	34·29	35·79
11. Sugar per cent. press cake	6·20	5·24
12. Molasses loss per cent. sugar in juice	12·68	13·83
13. Filter process loss per cent. sugar in juice	1·99	1·45
14. Unknown loss per cent. sugar in juice	3·00	2·48
15. Unknown loss per cent. sugar in cane	2·78	2·28
16. Coal per cent. cane	..	0·81
17. Firewood per cent. cane	..	5·82
18. Total days actual crushing	118	132
19. Total cane milled (maunds)	2,346,682-20	2,693,286
20. Sugar per cent. bagasse	2·87	3·01

No. 60. Clarification process used—Double Sulphitation.

——	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	No data	12·43	12·19	12·63	12·49
2. Yield per cent. cane	8·414	9·044	9·123	9·815	9·667
3. Molasses per cent. cane	4·477	4·013	3·25	3·26	3·20
4. Press cake per cent. cane	No data.	..	..	..	..
5. Mixed juice per cent. cane	..	..	30·12	83·28	80·95
6. Mill Extraction	..	..	36·12	91·43	90·90
7. Boiling House Extraction	..	..	84·59	84·72	84·78
8. Overall recovery	..	72·80	74·54	77·49	77·07
9. Purity of mixed juice	79·30	82·17	82·62	83·08	83·20
10. Purity of molasses	38·11	38·22	35·71	31·75	33·03
11. Sugar per cent. press cake	4·30	5·18	2·37	2·03	2·09
12. Molasses loss per cent. sugar in juice	No data	No data.	10·25	8·80	7·50
13. Filter process loss per cent. sugar in juice	do.	do.	No data.	No data.	No data.
14. Unknown loss per cent. sugar in juice	do.	do.	do.	do.	do.
15. Unknown loss per cent. sugar in cane	do.	do.	do.	do.	do.
16. Coal per cent. cane	do.	do.	1·056	0·433	0·314
17. Firewood per cent. cane	do.	do.	6·82	2·31	2·84
18. Total days actual crushing	do.	do.	129	No data	163
19. Total cane milled (maunds)	2,174,543-10	1,920,162-23	1,570,743-20	2,493,231-10	2,418,717-20
20. Sugar per cent. bagasse	4·24	4·29	4·34	3·45	3·36

STATEMENT No. II—*contd.*

No. 153. Clarification process used—Double Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane . . .	No record	12·39	12·64	13·07
2. Yield per cent. cane . . .	8·67	9·24	9·644	10·286
3. Molasses per cent. cane . .	4·38	4·37	No data	3·81
4. Press cake per cent. cane . .	2·03	No data	do.	1·48
5. Mixed juice per cent. cane . .	No data.	79·92	76·61	84·96
6. Mill extraction	do.	89·84	85·86	90·12
7. Boiling house extraction . .	do.	82·68	88·51	87·04
8. Overall recovery . . .	do.	74·29	76·00	78·43
9. Purity of mixed juice . . .	76·04	80·15	80·05	82·22
10. Purity of molasses . . .	36·07	35·38	36·63	36·17
11. Sugar per cent. press cake . .	8·85	9·17	7·75	8·74
12. Molasses loss per cent. sugar in juice	No data.	13·34	No data	11·03
13. Filter process loss per cent. sugar in juice.	do.	No data.	do.	·97
14. Unknown loss per cent. sugar in juice	do.	do.	do.	·96
15. Unknown loss per cent. sugar in cane	do.	do.	do.	·86
16. Coal per cent. cane . . .	2·41	0·11	1·90	0·90
17. Firewood per cent. cane . .	9·77	6·90	7·90	2·44
18. Total days actual crushing . .	67	171	158	156
19. Total cane milled (maunds) . .	9,039	44,140	4,699,115	732,366
20. Sugar per cent. bagasse . .	3·98	3·83	4·67	4·095

No. 133. Clarification process used—Double Sulphitation.

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—	1935-36.	1936-37.
1. Sugar per cent. cane	11·904	11·503
2. Yield per cent. cane	9·577	9·118
3. Molasses per cent. cane	3·471	3·937
4. Press cake per cent. cane	2·00	2·29
5. Mixed juice per cent. cane	85·40	83·26
6. Mill extraction	93·42	92·51
7. Boiling house extraction	85·96	85·31
8. Overall recovery	80·11	78·93
9. Purity of mixed juice	81·97	80·94
10. Purity of molasses	32·74	32·85
11. Sugar per cent. press cake	5·41	4·52
12. Molasses loss per cent. sugar in juice . .	9·87	11·60
13. Filter process loss per cent. sugar in juice .	·81	·97
14. Unknown loss per cent. sugar in juice . .	3·36	2·12
15. Unknown loss per cent. sugar in cane . .	3·14	1·96
16. Coal per cent. cane	0·040	0·205
17. Firewood per cent. cane	0·109	0·188
18. Total days actual crushing	132	161
19. Total cane milled (maunds)	3,109,600	4,036,228
20. Sugar per cent. bagasse	2·43	2·59

STATEMENT No. II—*contd.*

No. 150. Clarification process used—Double Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	12·51	13·02	12·60	13·14
2. Yield per cent. cane	8·59	9·79	10·02	10·69
3. Molasses per cent. cane	5·40	2·91	5·60	4·45
4. Press cake per cent. cane	1·36	2·14	1·18	1·13
5. Mixed juice per cent. cane	79·54	84·38	88·21	84·46
6. Mill extraction	84·45	90·16	91·54	92·96
7. Boiling house extraction	80·26	82·94	86·50	87·18
8. Overall recovery	67·78	74·96	79·18	81·04
9. Purity of mixed juice	74·62	76·04	74·19	79·95
10. Purity of molasses	31·00	33·67	32·86	31·11
11. Sugar per cent. press cake	6·02	9·78	7·46	8·35
12. Molasses loss per cent. sugar in juice	13·27	7·66	12·39	9·82
13. Filter process loss per cent. sugar in juice	·78	1·82	·78	·77
14. Unknown loss per cent. sugar in juice	5·69	7·58	·33	2·23
15. Unknown loss per cent. sugar in cane	4·81	6·85	·30	2·07
16. Coal per cent. cane	2·926	3·72	2·64	·815
17. Firewood per cent. cane	8·113	7·10	1·83	·726
18. Total days actual crushing	85	159	155	139
19. Total cane milled (maunds)	487,878	664,782	1,307,046	1,309,039
20. Sugar per cent. bagasse	6·73	4·91	4·39	3·86

No. 111. Clarification process used—Double Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	11·35	9·23	11·67	11·92
2. Yield per cent. cane	8·04	6·31	8·95	9·37
3. Molasses per cent. cane	4·63	4·26	4·17	3·59
4. Press cake per cent. cane	. .	3·17	3·17	3·19
5. Mixed juice per cent. cane	67·12	77·72	74·96	77·79
6. Mill extraction	79·27	90·00	90·69	91·05
7. Boiling house extraction	89·00	75·67	84·22	86·00
8. Overall recovery	70·55	68·10	76·38	78·30
9. Purity of mixed juice	76·29	74·34	80·41	81·34
10. Purity of molasses	32·42	31·78	31·43	29·98
11. Sugar per cent. press cake	9·12	6·20	6·76	5·74
12. Molasses loss per cent. sugar in juice	. .	15·42	11·89	9·96
13. Filter process loss per cent. sugar in juice	Wrong data.	2·37	2·02	1·65
14. Unknown loss per cent. sugar in juice	do.	6·54	1·87	2·39
15. Unknown loss per cent. sugar in cane	do.	5·89	1·70	2·18
16. Coal per cent. cane	0·50	0·42	0·308	0·0801
17. Firewood per cent. cane	. .	. .	. .	. .
18. Total days actual crushing	140	116	125	158
19. Total cane milled (maunds)	2,393,748	2,946,296	3,065,342	4,720,019
20. Sugar per cent. bagasse	3·76	3·16	3·22	3·06

STATEMENT No. II—*contd.*

No. 116. Clarification process used—Double Sulphitation.

——	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane .	No record	9·44	11·52	11·28
2. Yield per cent. cane .	8·20	6·72	8·10	8·91
3. Molasses per cent. cane .	4·80	4·80	4·50	4·30
4. Press cake per cent. cane .	No record.	No record.	No record.	2·97
5. Mixed juice per cent. cane	do.	do.	80·88	78·38
6. Mill extraction . .	No data.	No data.	89·73	84·57
7. Boiling house extraction .	do.	do.	82·96	93·13
8. Overall recovery . .	do.	do.	74·44	78·75
9. Purity of mixed juice .	78·75	73·35	77·41	78·08
10. Purity of molasses . .	33·38	31·95	31·94	32·39
11. Sugar per cent. press cane.	8·40	6·38	7·69	2·20
12. Molasses loss per cent. sugar in juice . .	No data.	No data.	13·67	Wrong data.
13. Filter process loss per cent. sugar in juice . .	do.	do.	No data	do.
14. Unknown loss per cent. sugar in juice . .	do.	do.	do.	do.
15. Unknown loss per cent. sugar in cane . .	do.	do.	do.	do.
16. Coal per cent. cane . .	..	..	..	0·003
17. Firewood per cent. cane .	..	3·00	2·18	2·10
18. Total days actual crushing	106	128	141	180
19. Total cane milled (maunds)	1,024,605	1,517,836	1,639,859	2,157,463
20. Sugar per cent. bagasse .	3·54	4·02	3·85	3·38

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STATEMENT No. II—*contd.*

No. 69. Clarification process used—Double Sulphitation.

—	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane .	11·88	No record	12·03	11·89	12·11
2. Yield per cent. cane .	8·39	8·51	9·02	9·53	9·686
3. Molasses per cent. cane .	4·13	4·90	3·27	3·40	3·66
4. Press cake per cent. cane . . .	3·08	2·60	3·52	2·60	3·03
5. Mixed juice per cent. cane. . . .	80·72	76·50	83·40	78·00	75·68
6. Mill extraction . .	84·53	No data	84·04	90·16	89·56
7. Boiling house extraction . . .	82·55	do.	87·92	88·63	89·04
8. Overall recovery . .	69·79	do.	74·67	79·91	79·75
9. Purity of mixed juice .	74·22	No record	82·20	81·60	81·08
10. Purity of molasses .	35·85	35·50	31·60	30·10	32·20
11. Sugar per cent. press cake . . .	3·08	8·10	5·10	3·20	3·28
12. Molasses loss per cent. sugar in juice. . .	13·03	No data	8·88	8·67	10·02
13. Filter process loss per cent. sugar in juice .	·95	do.	1·76	1·24	·92
14. Unknown loss per cent. sugar in juice . .	3·47	do.	1·44	1·46	·02
15. Unknown loss per cent. sugar in cane . .	2·93	do.	1·22	1·32	·02
16. Coal per cent. cane .	1·95	..	..	..	0·094
17. Firewood per cent. cane.	5·75	11·40	12·33	10·50	1·45
18. Total days actual crushing	109	99	77	139	150
19. Total cane milled (maunds) . .	1,293,677·27	1,886,784	1,277,798	2,187,806·20	2,836,733·20
20. Sugar per cent. bagasse.	3·08	8·10	5·10	3·20	3·28

Purities are G. P.

STATEMENT No. II—*contd.*

No. 156. Clarification process used—Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane .	11·82	12·67	12·88	12·52
2. Yield per cent. cane . .	8·64	10·00	9·824	9·88
3. Molasses per cent. cane .	4·21	3·45	3·25	3·27
4. Press cake per cent. cane .	1·31	1·23	1·18	1·38
5. Mixed juice per cent. cane.	80·48	82·19	79·85	85·40
6. Mill extraction . .	89·10	89·58	87·60	89·15
7. Boiling house extraction .	81·64	87·48	86·46	88·08
8. Overall recovery . .	72·69	78·36	75·73	78·52
9. Purity of mixed juice .	78·46	81·00	81·48	83·81
10. Purity of molasses . .	37·84	37·05	36·98	36·89
11. Sugar per cent. press cake	8·42	8·27	8·61	7·45
12. Molasses loss per cent. sugar in juice . .	13·35	10·14	9·93	10·32
13. Filter process loss per cent. sugar in juice . .	1·05	·90	·90	·94
14. Unknown loss per cent. sugar in juice . .	3·96	1·48	2·71	·66
15. Unknown loss per cent. sugar in cane . .	3·53	1·33	2·37	·59
16. Coal per cent. cane . .	..	..	..	..
17. Firewood per cent. cane .	—	—	—	..
18. Total days actual crushing . . .	131	161	171	172
19. Total cane milled (maunds) . .	464,864·5	851,123·1	1,052,160	1,216,407·36
20. Sugar per cent. bagasse .	4·03	3·81	4·18	3·91

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STATEMENT No. II—*contd.*

No. 73. Clarification process used—Double Sulphitation.

—	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane .	12·169	12·44	12·117	11·736	12·42
2. Yield per cent. cane .	8·84	9·292	9·033	9·344	9·819
3. Molasses per cent. cane .	4·47	4·10	3·515	3·468	2·957
4. Press cake per cent. cane . . .	No record	No record	2·896	2·502	2·288
5. Mixed juice per cent. cane . . .	80·48	85·605	86·01	87·874	85·66
6. Mill extraction . .	No data	91·47	80·48	90·38	89·37
7. Boiling house extraction . . .	do.	80·83	81·62	88·07	88·46
8. Overall recovery . .	71·91	73·94	73·86	79·62	79·06
9. Purity of mixed juice .	No record	81·40	81·70	79·62	81·40
10. Purity of molasses .	do.	No record	40·00	32·63	34·90
11. Sugar per cent. press cake . . .	do.	do.	8·442	4·735	2·435
12. Molasses loss per cent. sugar in juice . .	No data	No data	12·30	9·86	8·40
13. Filter process loss per cent. sugar in juice .	do.	do.	2·23	1·12	·50
14. Unknown loss per cent. sugar in juice . .	do.	do.	3·85	·91	2·67
15. Unknown loss per cent. sugar in cane . .	do.	do.	3·48	·90	2·32
16. Coal per cent. cane .	No record	·506	1·12	·0916	0·184
17. Firewood per cent. cane . . .	do.	3·115	4·265	2·32	3·167
18. Total days actual crushing . .	166	162	103	153	155·54
19. Total cane milled (maunds) . .	1,221,890·82	1,399,269·60	1,290,756·26	2,334,122·20	2,308,656
20. Sugar per cent. bagasse	4·29	3·504	3·938	3·685	3·759

STATEMENT No. II—*contd.*

No. 118. Clarification process used—Double Sulphitation.

—	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	11·12	9·98	10·97	11·14
2. Yield per cent. cane	7·77	7·63	8·42	8·98
3. Molasses per cent. cane	Not known	4·59	4·62	3·80
4. Press cake per cent. cane	1·42	1·84	2·39	2·47
5. Mixed juice per cent. cane	71·54	82·55	79·44	80·33
6. Mill extraction	87·24	89·25	90·07	91·89
7. Boiling house extraction	79·52	84·80	84·76	87·46
8. Overall recovery	69·37	75·68	76·35	80·37
9. Purity of mixed juice	75·95	72·95	75·67	79·77
10. Purity of molasses	33·04	33·30	33·13	33·73
11. Sugar per cent. press cake	4·67	1·73	1·31	1·28
12. Molasses loss per cent. sugar in juice	No data	16·14	14·69	11·57
13. Filter process loss per cent. sugar in juice	·68	Wrong data	·32	·34
14. Unknown loss per cent. sugar in juice	No data	do.	·23	·63
15. Unknown loss per cent. sugar in cane	do.	do.	·21	·54
16. Coal per cent. cane	3·51	0·64	0·07	0·01
17. Firewood per cent. cane	2·32	1·51	0·53	0·63
18. Total days actual crushing	78	123	157	124½
19. Total cane milled (maunds)	628,792-10	1,626,320-0	2,881,524-20	2,686,338-25
20. Sugar per cent. bagasse	4·49	2·71	3·03	2·64

No. 42. Clarification process used—Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·81	11·42
2. Yield per cent. cane	8·69	8·85
3. Molasses per cent. cane	3·59	3·54
4. Press cake per cent. cane	3·20	1·95
5. Mixed juice per cent. cane	78·18	76·74
6. Mill extraction	87·50	88·96
7. Boiling house extraction	83·37	86·66
8. Overall recovery	72·90	77·09
9. Purity of mixed juice	79·35	81·37
10. Purity of molasses	33·64	34·06
11. Sugar per cent. press cake	4·78	4·08
12. Molasses loss per cent sugar in juice	12·80	11·14
13. Filter process loss per cent. sugar in cane	1·66	·78
14. Unknown loss per cent. sugar in juice	2·17	1·52
15. Unknown loss per cent. sugar in cane	1·90	1·35
16. Coal per cent. cane	0·054	0·032
17. Firewood per cent. cane	0·495	0·035
18. Total days actual crushing	149	136
19. Total cane milled (maunds)	2,014,837-20	2,050,826-30
20. Sugar per cent. bagasse	3·94	3·49

STATEMENT No. II—*contd.*

No. 20. Clarification process used—Carbonatation.

——	1933-34.	1934-35.	1935-36.	1936-37.
1. Sugar per cent. cane	No record.	11·14	11·33	11·27
2. Yield per cent. cane	2·20	8·57	8·87	9·317
3. Molasses per cent. cane	3·55	3·39	3·36	2·96
4. Press cake per cent. cane	No record	6·69	6·33	6·59
5. Mixed juice per cent. cane	do.	79·09	81·57	84·92
6. Mill extraction	No sufficient data	89·45	91·14	92·53
7. Boiling house extraction	do.	85·74	85·45	88·08
8. Overall recovery	do.	76·70	77·87	82·33
9. Purity of mixed juice	77·62	80·51	80·03	77·97 (G.P.)
10. Purity of molasses	37·07	39·55	36·07	36·40 ,,
11. Sugar per cent. press cake	1·95	1·52	0·88	0·84
12. Molasses loss per cent. sugar in juice	No sufficient data	12·05	11·46	9·86
13. Filter process loss per cent. sugar in juice	do.	1·02	·54	·53
14. Unknown loss per cent. sugar in juice	do.	1·19	2·55	·63
15. Unknown loss per cent. sugar in cane	do.	1·06	2·32	5·8
16. Coal per cent. cane	No record	1·43	0·40	0·23
17. Firewood per cent. cane	do.	1·19	0·42	0·32
18. Total days actual crushing	126	102	120·2	170
19. Total cane milled (maunds)	2,889,774	1,945,060	2,913,844	447,690
20. Sugar per cent. bagasse	5·50	3·49	3·10	2·63

No. 64. Clarification process used—Sulphitation.

——	1935-36.	1936-37.
1. Sugar per cent. cane	12·94	12·98
2. Yield per cent. cane	10·184	10·031
3. Molasses per cent. cane	3·54	3·665
4. Press cake per cent. cane	1·76	1·733
5. Mixed juice per cent. cane	78·35	78·165
6. Mill extraction	87·86	87·46
7. Boiling house extraction	88·80	87·48
8. Overall recovery	78·02	76·50
9. Purity of mixed juice	83·72	83·74
10. Purity of molasses	35·39	35·42
11. Sugar per cent. press cake	1·51	2·48
12. Molasses loss per cent. sugar in juice	10·65	10·93
13. Filter process loss per cent. sugar in juice	·23	·38
14. Unknown loss per cent. sugar in juice	·32	1·21
15. Unknown loss per cent. sugar in cane	·28	1·06
16. Coal per cent. cane	·4422	·388
17. Firewood per cent. cane	1·2745	·606
18. Total days actual crushing	..	150
19. Total cane milled (maunds)	1,991,782·25	2,577,120
20. Sugar per cent. bagasse	4·60	4·33

STATEMENT No. II—*contd.*

No. 49. Clarification process used—Double Carbonatation with dry liming.

—	1935-36.	1936-37.
1. Sugar per cent. cane	12·12	11·43
2. Yield per cent. cane	9·26	9·44
3. Molasses per cent. cane	3·19	3·32
4. Press cake per cent. cane	7·24	6·71
5. Mixed juice per cent. cane	85·80	90·46
6. Mill extraction	86·66	94·41
7. Boiling house extraction	87·90	87·22
8. Overall recovery	76·17	82·33
9. Purity of mixed juice	80·93	80·34
10. Purity of molasses	35·86	34·34
11. Sugar per cent. press cake	1·48	·94
12. Molasses loss per cent. sugar in juice	10·88	10·42
13. Filter process loss per cent. sugar in juice	1·02	·58
14. Unknown loss per cent. sugar in juice	·20	1·78
15. Unknown loss per cent. sugar in cane	·17	1·68
16. Coal per cent. cane	0·70	1·56
17. Firewood per cent. cane	0·009	0·02
18. Total days actual crushing	150	139·29
19. Total cane milled (maunds)	3,028,425	2,889.503
20. Sugar per cent. bagasse	3·86	1·90

No. 38. Clarification process used—Carbonatation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·54	11·21
2. Yield per cent. cane	10·06	9·657
3. Molasses per cent. cane	2·88	2·90
4. Press cake per cent. cane	8·23	8·07
5. Mixed juice per cent. cane	90·52	90·17
6. Mill extraction	95·37	95·39
7. Boiling house extraction	90·86	90·10
8. Overall recovery	86·66	85·90
9. Purity of mixed juice	78·83	79·49
10. Purity of molasses	31·52	34·11
11. Sugar per cent. press cake	0·64	0·60
12. Molasses loss per cent. sugar in juice	8·38	9·27
13. Filter process loss per cent. sugar in juice	·48	·45
14. Unknown loss per cent. sugar in juice	·28	·18
15. Unknown loss per cent. sugar in cane	·27	·17
16. Coal per cent. cane	0·71	0·17
17. Firewood per cent. cane	0·06	0·048
18. Total days actual crushing	122	148
19. Total cane milled (maunds)	2,910,437	3,697,174
20. Sugar per cent. bagasse	1·68	1·59

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STATEMENT No. II—*contd.*

No. 68. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	Not given.	11·96
2. Yield per cent. cane	8·75	9·79
3. Molasses per cent. cane	4·07	3·21
4. Press cake per cent. cane	2·81	1·98
5. Mixed juice per cent. cane	85·90	89·73
6. Mill extraction	No data.	93·33
7. Boiling house extraction	do.	87·46
8. Overall recovery	do.	81·62
9. Purity of mixed juice	79·12	82·33
10. Purity of molasses	35·85	39·33
11. Sugar per cent. press cake	Not given.	Not given.
12. Molasses loss per cent. sugar in juice	No data.	10·80
13. Filter process loss per cent. sugar in juice	do.	No data.
14. Unknown loss per cent. sugar in juice	do.	do.
15. Unknown loss per cent. sugar in cane	do.	do.
16. Coal per cent. cane	0·247	..
17. Firewood per cent. cane	7·14	0·91
18. Total days actual crushing	172	172
19. Total cane milled (maunds)	2,929,768	3,460,806
20. Sugar per cent. bagasse	Not given.	Not given.

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No. 14. Clarification process used—Double Carbonatation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	10·75	10·65
2. Yield per cent. cane	8·76	8·92
3. Molasses per cent. cane	3·17	3·12
4. Press cake per cent. cane	Not given.	Not given.
5. Mixed juice per cent. cane	92·24	88·61
6. Mill extraction	93·35	94·28
7. Boiling house extraction	89·12	88·41
8. Overall recovery	81·32	83·35
9. Purity of mixed juice	79·94	78·02
10. Purity of molasses	37·81	34·78
11. Sugar per cent. press cake	·86	·75
12. Molasses loss per cent. sugar in juice	11·32	10·09
13. Filter process loss per cent. sugar in juice	No data	No data.
14. Unknown loss per cent. sugar in juice	do.	do.
15. Unknown loss per cent. sugar in cane	do.	do.
16. Coal per cent. cane	·01	·01
17. Firewood per cent. cane	*Nil*	*Nil.*
18. Total days actual crushing	115	152·7
19. Total cane milled (maunds)	2,207,642	3,124,847
20. Sugar per cent. bagasse	2·10	1·84

STATEMENT No. II—*contd.*

No. 137. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	10·89	11·60
2. Yield per cent. cane	7·11	8·05
3. Molasses per cent. cane	4·60	3·30
4. Press cake per cent. cane	3·70	3·00
5. Mixed juice per cent. cane	71·80	70·50
6. Mill extraction	85·45	87·52
7. Boiling house extraction	75·97	79·32
8. Overall recovery	64·91	69·33
9. Purity of mixed juice	79·90	85·20
10. Purity of molasses	35·06	39·90
11. Sugar per cent. press cake	7·60	7·25
12. Molasses loss per cent. sugar in juice	15·06	12·09
13. Filter process loss per cent. sugar in juice	3·03	2·14
14. Unknown loss per cent. sugar in juice	5·94	6·45
15. Unknown loss per cent. sugar in cane	5·08	5·65
16. Coal per cent. cane	12·60	14·20
17. Firewood per cent. cane	..	..
18. Total days actual crushing	127	118
19. Total cane milled (maunds)	14,011,725	153,153
20. Sugar per cent. bagasse	5·51	5·68

No. 73. Clarification process used—Double Sulphitation.

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—	1935-36.	1936-37.
1. Sugar per cent. cane	11·736	12·42
2. Yield per cent. cane	9·344	9·819
3. Molasses per cent. cane	3·468	2·967
4. Press cake per cent. cane	2·502	2·288
5. Mixed juice per cent. cane	87·874	85·66
6. Mill extraction	90·38	89·37
7. Boiling house extraction	88·07	88·46
8. Overall recovery	79·62	79·06
9. Purity of mixed juice	79·62	81·40
10. Purity of molasses	32·63	34·90
11. Sugar per cent. press cake	4·735	2·435
12. Molasses loss per cent. sugar in juice	9·86	8·40
13. Filter process loss per cent. sugar in juice	1·12	·50
14. Unknown loss per cent. sugar in juice	0·91	2·67
15. Unknown loss per cent. sugar in cane	0·90	2·32
16. Coal per cent. cane	0·916	0·184
17. Firewood per cent. cane	2·32	3·167
18. Total days actual crushing	143	139
19. Total cane milled (maunds)	2,324,122-20	2,308,656-0
20. Sugar per cent. bagasse	3·685	3·759

STATEMENT No. II—*contd.*

No. 52. Clarification process used—Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·96	12·16
2. Yield per cent. cane	10·36	10·49
3. Molasses per cent. cane	2·95	2·82
4. Press cake per cent. cane	2·00	2·13
5. Mixed juice per cent. cane	95·57	95·10
6. Mill extraction	94·50	95·23
7. Boiling house extraction	91·42	91·11
8. Overall recovery	86·38	86·02
9. Purity of molasses	26·00	31·27
10. Purity of mixed juice	81·79	83·41
11. Sugar per cent. press cake	26·00	31·27
12. Molasses loss per cent. sugar juice	0·79	7·57
13. Filter process loss per cent. sugar in juice	·63	1·03
14. Unknown loss per cent. sugar in juice	1·16	·26
15. Unknown loss per cent. sugar in cane	1·13	0·25
16. Coal per cent. cane	2·52	0·49
17. Firewood per cent. cane	1·21	1·27
18. Total days actual crushing	158	146
19. Total cane milled (maunds)	1,291,216-0	2,232,225-10
20. Sugar per cent. bagasse	2·07	2·10

No. 58. Clarification process used—Sulphitation.

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—	1935-36.	1936-37.
1. Sugar per cent. cane	11·85	12·22
2. Yield per cent. cane	9·76	9·838
3. Molasses per cent. cane	3·53	3·69
4. Press cake per cent. cane	1·58	2·37
5. Mixed juice per cent. cane	84·09	81·85
6. Mill extraction	91·91	91·09
7. Boiling house extraction	89·25	88·20
8. Overall recovery	82·04	80·35
9. Purity of mixed juice	82·80	82·22
10. Purity of molasses	31·77	32·10
11. Sugar per cent. press cake	1·60	1·35
12. Molasses loss per cent. sugar in juice	10·30	10·39
13. Filter process loss per cent. sugar in juice	·23	·29
14. Unknown loss per cent. sugar in juice	·22	1·12
15. Unknown loss per cent. sugar in cane	·20	1·02
16. Coal per cent. cane	·19	Not given.
17. Firewood per cent. cane	3·41	do.
18. Total days actual crushing	165	174
19. Total cane milled (maunds)	2,758,373	3,329,006
20. Sugar per cent. bagasse	2·93	2·96

STATEMENT No. II—*contd.*

No. 133. Clarification process used—Carbonatation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·01	12·13
2. Yield per cent. cane	8·13	9·395
3. Molasses per cent. cane	4·32	3·70
4. Press cake per cent. cane	6·91	6·20
5. Mixed juice per cent. cane	75·01	79·72
6. Mill extraction	89·54	90·40
7. Boiling house extraction	82·15	85·25
8. Overall recovery	73·55	77·14
9. Purity of mixed juice	76·53	79·36
10. Purity of molasses	35·75	33·43
11. Sugar per cent. press cake	1·39	1·69
12. Molasses loss per cent. sugar in juice	14·73	10·97
13. Filter process loss per cent. sugar in juice	·97	·95
14. Unknown loss per cent. sugar in juice	2·15	2·83
15. Unknown loss per cent. sugar in cane	1·95	2·56
16. Coal per cent. cane	0·012	0·012
17. Firewood per cent. cane	6·46	1·99
18. Total days actual crushing	107	149
19. Total cane milled (maunds)	1,397,025-30	2,244,684-10
20. Sugar per cent. bagasse	3·47	3·76

No. 23. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	10·88	11·23
2. Yield per cent. cane	8·56	8·82
3. Molasses per cent. cane	4·07	4·32
4. Press cake per cent. cane	2·43	2·96
5. Mixed juice per cent. cane	84·01	82·48
6. Mill extraction	90·82	92·21
7. Boiling house extraction	86·00	84·76
8. Overall recovery	78·11	78·16
9. Purity of mixed juice	75·97	76·79
10. Purity of molasses	31·09	32·39
11. Sugar per cent. press cake	1·77	1·83
12. Molasses loss per cent. sugar in juice	12·63	12·63
13. Filter process loss per cent. sugar in juice	·43	·52
14. Unknown loss per cent. sugar in juice	·94	2·09
15. Unknown loss per cent. sugar in cane	·85	1·93
16. Coal per cent. cane	1·80	·325
17. Firewood per cent. cane	5·90	1·696
18. Total days actual crushing	144	166
19. Total cane milled (maunds)	1,824,750	2,779,361
20. Sugar per cent. bagasse	2·82	2·44

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STATEMENT No. II—*contd.*

No. 22. Clarification process used—Double Carbonatation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·08	11·29
2. Yield per cent. cane	9·21	9·41
3. Molasses per cent. cane	3·54	3·60
4. Press cake per cent. cane	7·71	7·59
5. Mixed juice per cent. cane	88·88	89·73
6. Mill extraction	94·19	94·56
7. Boiling house extraction	88·00	87·52
8. Overall recovery	82·88	82·75
9. Purity of mixed juice	77·87 G. P.	77·35
10. Purity of molasses	36·57 G. P.	34·67
11. Sugar per cent. press cake	0·70	0·75
12. Molasses loss per cent. sugar in juice	12·46	11·87
13. Filter process loss per cent. sugar in juice	·52	·53
14. Unknown loss per cent. sugar in juice	Data incorrect.	·08
15. Unknown loss per cent. sugar in cane	do.	·08
16. Coal per cent. cane	0·63	0·15
17. Firewood per cent. cane	0·07	0·03
18. Total days actual crushing	122	156½
19. Total cane milled (maunds)	2,870,270	3,724,958
20. Sugar per cent. bagasse	1·94	1·84

No. 65. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	12·11	11·82
2. Yield per cent. cane	9·87	9·65
3. Molasses per cent. cane	3·65	3·24
4. Press cake per cent. cane	1·39	2·05
5. Mixed juice per cent. cane	86·42	89·87
6. Mill extraction	91·05	90·93
7. Boiling house extraction	88·35	89·04
8. Overall recovery	80·44	80·97
9. Purity of mixed juice	81·59	82·14
10. Purity of molasses	31·13	33·35
11. Sugar per cent. press cake	2·36	2·40
12. Molasses loss per cent. sugar in juice	10·34	10·15
13. Filter process loss per cent. sugar in juice	·30	·46
14. Unknown loss per cent. sugar in juice	1·01	·35
15. Unknown loss per cent. sugar in cane	·92	·33
16. Coal per cent. cane	0·20	0·08
17. Firewood per cent. cane	0·39	0·62
18. Total days actual crushing	171	177
19. Total cane milled (maunds)	2,638,124	2,783,584
20. Sugar per cent. bagasse	3·27	3·05

सत्यमेव जयते

STATEMENT No. II—*contd.*

No. 26. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·36	11·26
2. Yield per cent. cane	9·89	9·39
3. Molasses per cent. cane	3·37	3·66
4. Press cake per cent. cane	1·87	1·93
5. Mixed juice per cent. cane	95·00	96·92
6. Mill extraction	94·36	94·34
7. Boiling house extraction	90·14	88·16
8. Overall recovery	85·06	83·56
9. Purity of mixed juice	80·34	79·19
10. Purity of molasses	29·76	30·89
11. Sugar per cent. press cake	4·03	5·05
12. Molasses loss per cent. sugar in juice	8·84	9·92
13. Filter process loss per cent. sugar in juice	·69	·93
14. Unknown loss per cent. sugar in juice	·33	·99
15. Unknown loss per cent. sugar in cane	·31	·93
16. Coal per cent. cane	..	..
17. Firewood per cent. cane	..	..
18. Total days actual crushing	153·75	138
19. Total cane milled (maunds)	3,592,972	3,186,629
20. Sugar per cent. bagasse	1·94	1·94

No. 20. Clarification process used—Double Carbonatation (Dehaan) Sulphitation (Harloff).

सत्यमेव जयते

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·33	11·27
2. Yield per cent. cane	8·87	9·317
3. Molasses per cent. cane	3·36	2·96
4. Press cake per cent. cane	6·33	6·59
5. Mixed juice per cent. cane	81·57	84·92
6. Mill extraction	91·14	92·53
7. Boiling house extraction	85·45	88·98
8. Overall recovery	77·87	82·35
9. Purity of mixed juice	80·03	77·97
10. Purity of molasses	36·07	36·40
11. Sugar per cent. press cake	0·88	0·84
12. Molasses loss per cent. sugar in juice	11·46	9·86
13. Filter process loss per cent. sugar in juice	·54	·58
14. Unknown loss per cent. sugar in juice	2·55	·64
15. Unknown loss per cent. suger in cane	2·32	·59
16. Coal per cent. cane	0·40	0·23
17. Firewood per cent. cane	0·42	0·32
18. Total days actual crushing	122·2	170
19. Total cane milled (maunds)	2,913,844	4,476,907·20
20. Sugar per cent. bagasse	3·10	2·63

STATEMENT No. II—*contd.*

No. 28. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·98	11·721
2. Yield per cent. cane	9·592	9·435
3. Molasses per cent. cane	3·74	3·85
4. Press cake per cent. cane	Not given	2·22
5. Mixed juice per cent. cane	86·68	84·61
6. Mill extraction	92·41	93·80
7. Boiling house extraction	86·40	85·57
8. Overall recovery	79·84	80·26
9. Purity of mixed juice	80·30	79·75
10. Purity of molasses	31·78	32·81
11. Sugar per cent. press cake	4·13	3·58
12. Molasses loss per cent. sugar in juice	11·39	11·04
13. Filter process loss per cent. sugar in juice	..	·72
14. Unknown loss per cent. sugar in juice	..	2·67
15. Unknown loss per cent. sugar in cane	..	2·50
16. Coal per cent. cane	·245	·659
17. Firewood per cent. cane	·042	·011
18. Total days actual crushing	147	163
19. Total cane milled (maunds)	2,506,357	3,117,645
20. Sugar per cent. bagasse	2·79	2·71

No. 150. Clarification process used—Double Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	12·60	13·14
2. Yield per cent. cane	10·205	10·69
3. Molasses per cent. cane	5·00	4·45
4. Press cake per cent. cane	1·18	1·13
5. Mixed juice per cent. cane	88·21	84·46
6. Mill extraction	90·12	93·09
7. Boiling house extraction	88·14	86·86
8. Overall recoverery	80·69	81·04
9. Purity of mixed juice	74·19	79·95
10. Purity of molasses	32·86	31·11
11. Sugar per cent. press cake	7·46	8·352
12. Molasses loss per cent. sugar in juice	Wrong data	0·81
13. Filter process loss per cent. sugar in juice	·76	·77
14. Unknown loss per cent. sugar in juice	No data	2·54
15. Unknown loss per cent. sugar in cane	do.	2·36
16. Coal per cent. cane	2·64	·815
17. Firewood per cent. cane	1·83	·726
18. Total days actual crushing	109	118
19. Total cane milled (maunds)	1,307,046·195	1,309,039·095
20. Sugar per cent. bagasse	4·39	3·859

सत्यमेव जयते

STATEMENT No. II—*concld.*

No. 102. Clarification process used—Sulphitation.

—	1935-36.	1936-37.
1. Sugar per cent. cane	11·19	11·91
2. Yield per cent. cane	9.193	9·88
3. Molasses per cent. cane	No record	3·51
4. Press cake per cent. cane	do.	No record.
5. Mixed juice per cent. cane	84·11	85·92
6. Mill extraction	91·81	92·45
7. Boiling house extraction	89·02	89·21
8. Overall recovery	81·74	82·47
9. Purity of mixed juice	76·50	79·70
10. Purity of molasses	29·90	30·10
11. Sugar per cent. press cake	4·70	3·99
12. Molasses loss per cent. sugar in juice	No data	8·52
13. Filter process loss per cent. sugar in juice	do.	No data.
14. Unknown loss per cent. sugar in juice	do.	do.
15. Unknown loss per cent. sugar in cane	do.	do.
16. Coal per cent. cane	·33	·03
17. Firewood per cent. cane	1·22	·40
18. Total days actual crushing	127	155
19. Total cane milled (maunds)	3,168,830	2,507,805
20. Sugar per cent. bagasse	4·70	3·99

(2) *Letter No. 356, dated the 29th June, 1937, from the Secretary, Tariff Board, to Indian Sugar Mills Association, Calcutta.*

I am directed to say that the Board find that for a proper understanding of the sugar marketing problem, they will have to go into the circumstances which led up to the present situation. They would, therefore, be glad of a brief account of sugar marketing arrangements since 1930 with special reference to the transition from imported sugar to Indian made sugar. Any special features of particular years such as the effect of the outbreak and termination of the Abyssinian War may be mentioned.

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(3) *Letter No. TBE/2/2169, dated the 22nd July, 1937, from the Indian Sugar Mills Association, Calcutta.*

I beg to acknowledge receipt of your letter No. 356, dated the 29th June, 1937, and thank you for the same.

As regards the development and change in sugar marketing arrangements since 1930, I am directed to submit that the most noteworthy consequence of the grant of protection to the Sugar Industry in 1932 has been the stoppage of imports of foreign sugar to a very great extent and a remarkable increase in the production of indigenous sugar. A necessary corollary of this development has been that whereas before the grant of protection the marketing of imported sugar was dominated by big importers who directly sold sugar to retail merchants in different parts of the country, now, as a result of the expansion of Indian production a large number of comparatively small merchants has come into existence who are acting as middlemen between factories and the retail dealers. The importance of the big dealers has thus been greatly reduced and sugar marketing is no longer concentrated in the hands of a few merchants but has become spread out and diversified. In fact there are some manufacturers who have tried to eliminate even these middlemen and are dealing with all the retail merchants directly.

As regards the other point raised in your letter under reference, I am directed to point out that when the Italo-Abyssinian War broke out towards the beginning of the crushing season, 1935-36, it was generally apprehended that the said war may develop into an international conflagration, the result of which was anticipated to be a general rise in all commodities, particularly of daily consumption. The merchants, under this expectation, registered a good many orders for forward deliveries, and gave an impetus to prices of sugar which recorded a substantial rise. However, as the crushing season was approaching its end it gradually became clear that there was no danger of the Italo-Abyssinian War developing into an international one and the prices tended to revert to their former level. The Italo-Abyssinian War thus had only the effect of raising prices for a short time, but an indirect result of it was that sugar merchants in India stood committed to contracts of forward deliveries which however, in view of declining prices they were reluctant to fulfill. That naturally led to some dislocation of trade and is one of the reasons for the out-going season having started with a stock of sugar at hand.

I hope the above remarks will be found to be of some help to the Board.

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(4) *Letter No. 402, dated the 2nd July, 1937, from the Secretary, Tariff Board, to the Secretary, Indian Sugar Mills' Association, Calcutta.*

The All-India Sugar Merchants' Conference, Cawnpore, in their representation to the Tariff Board referred to certain papers a list of which is appended below and desired that copies of them may be obtained from your Association. I am to request that 6 copies of the papers noted below may kindly be sent to the Secretary, Tariff Board, Bombay.

(1) Copy dated 6th August, 1936, of Proceedings of the Conference between the Committee of the Indian Sugar Mills' Association and representatives of Sugar Merchants held on 28th and 29th July, 1936, at Calcutta.

(2) Note regarding corrections to be made in above Proceedings, dated the 10th August, 1936.

(3) Copies of the contract discussed at the above Conference.

(4) Copies of Contract form adopted by the Annual General Meeting of the Indian Sugar Mills' Association, and printed in September, 1936.

(5) Contract form adopted as a result of Conference of 21st January, 1937.

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(5) *Letter No. TBE/2/2177, dated the 22nd July, 1937, from Indian Sugar Mills' Association, Calcutta.*

I beg to acknowledge receipt of your letter No. 402, dated the 2nd July, 1937, and thank you for the same. I am enclosing herewith the required number of copies of papers noted in your letter under reference. I regret that no spare copies of the Contract Form mentioned in Item No. III are available, of which, therefore, I am able to send only one copy.

In this connection I am directed by the Committee to submit for the Board's consideration a few remarks with regard to the developments in connection with the Standard Contract Form of the Association for the sale of Sugar. After the Association came into existence in 1932 the Association took in hand the matter of having a Standard Form for the sale of sugar for its members and after consultations with some of the merchants the Association adopted a Standard Form in 1934. The Committee wish to acknowledge here the help received from Mr. R. C. Srivastava in connection with the drawing up of this form. This form was adopted by many of the member mills for their sales and there were no complaints received from any quarter till the crushing season 1935-36. Towards the end of 1936, however, sugar prices suddenly went up owing to the fear of Italo-Abyssinian conflict developing into an international war and all merchants had entered into huge contracts for sugar on the forward basis.

It was, however, soon apparent that the conflict remained localised and as international tension had been thus released, prices came down. Moreover, as the crushing campaign came to a close by April, 1936, it was becoming clear that the actual output of sugar had been much more than the official forecast issued by the Sugar Technologist. These facts lead to a decline in prices and the merchants consequently approached the manufacturers for relaxation of some of the provisions of the contracts and the Mills did accommodate them as far as possible. The idea of the revision of the contract was thus first mooted by the merchants in the season 1936. Till then they had been trading on the Standard Form of the Association (marked No. 3) but had apparently no cause of complaint. The Committee, however, arranged a conference with the representatives of the Sugar Merchants on the request of the latter for a revision of the Contract Form. This conference was held on the 28th/29th July, 1936, at Calcutta. The proposals of the Sugar Merchants for changes in the Contract Form were thoroughly discussed with them and the Contract Form was accordingly amended. I would like to mention here that at this conference it was agreed that the only change that need be made in the Contract Form was with regard to Clause 8 of the Contract Form (Last paragraph of page 5 of the proceedings) namely that "first portion of this clause should be changed to provide that sugar should be accordingly to sealed samples or according to the Indian Sugar Standards made by the factorios". This change was accordingly adopted as per Contract Form No. 2 enclosed herewith.

As I have already pointed out, however, owing to special circumstances enumerated above, the merchants found it very difficult to fulfil the contracts which they had entered into during the 1935-36 crushing season. The problem of transportation of sugar during the rainy season was also a new one this year and there were therefore various complaints about the damage to sugar consignments during transit. The merchants insisted upon a further amendment of clause 8 of the Committee and the Committee accepted their request to again discuss the Contract Form. The second Conference was accordingly held on 21st January, 1937, and I am enclosing herewith copies of the proceedings of the Conference also. The Conference reached agreement on all points excepting a portion of clause 8 in the existing Contract Form (copy enclosed marked 3*) printed in italics. Both the representatives of the merchants and the Committee of the Association agreed even so far that the portion in italics should be optional. The merchants, however, insisted that this portion should not at all occur in the Contract Form. The Committee could not, however, agree to the omission of this clause altogether but they tried to meet the merchants by agreeing to put this portion in italics and inform the members that this may be deleted in case both parties were agreed while making a particular contract.

I have stated the facts at some length so that the Board may be able to appreciate the developments correctly.

It will be seen from the above that this Association has always tried to meet all reasonable demands of the merchants and the Committee assure that in future also they would be ready to accommodate them as far as possible consistent with the safety of the interests of the manufacturers.

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* Not printed.

Enclosure No. 1.

INDIAN SUGAR MILLS ASSOCIATION.

Circular No. 60 of 1936.

135, Canning Street,
Calcutta,
Dated the 10th August, 1936.

To

All Members of the Association.

Re Proceedings of the Conference with Sugar Merchants on the 28th and 29th July, 1936.

In continuation of this Office Circular No. 57 of 1936, dated the 8th August, 1936, I am enclosing herewith a note showing certain corrections and additions to be made in the Proceedings of the Conference between the Committee of the Indian Sugar Mills' Association and Sugar Merchants held on 28th and 29th July, 1936, a copy of which was sent to you with the above Circular. Please make the necessary corrections in your copy.

ANNEXURE.

INDIAN SUGAR MILLS ASSOCIATION.

Calcutta, the 10th August, 1936.

Note regarding corrections to be made in the Proceedings of the Conference between the Committee of the Indian Sugar Mills' Association and representatives of Sugar Merchants held on 28th and 29th July, 1936, at Calcutta.

1. *On page 2 in paragraph 3, line 5,* instead of "to quote slightly higher prices" please *read* "to quote slightly *lower* prices".

2. *On page 5, clause 8,* at the end of the clause please *insert* the following sentence:—

> "The Committee did not agree to recommend any change in the second portion of the clause, *i.e.*, from the words 'provided that the seller . . . . has no control'".

3. *On page 6, clause 9, line 1,* after the words "it was agreed" please *insert* "Cawnpore Merchants dissenting".

4. *Page 6, clause 11,* at the end of the paragraph please *add* "any intermediate place to which despatch is first made under clause 2 shall be deemed the destination for the purposes of this clause".

5. *Page 9,* at the end of the paragraph numbered (1) please *add* "dealers should not make any unavoidable alteration in the starting date, the basis of the claim for compensation".

6. *On page 10* before the sentence "The Conference then adjourned . . . .", etc., please *insert* the following (4):—

> "(4) *Merchants' complaints of shortages in weight.*—The Committee agreed to circularise factories requesting them to test the weighing machines and weighbridges daily."

"Owing to the lateness of the hour and to depletion of Members, the meeting was unable to discuss fully the question of establishing a Terminal Market and a Sugar Selling Organisation."

Enclosure No. 2.

INDIAN SUGAR MILLS ASSOCIATION.

Circular No. 57 of 1936.

135, Canning Street,
Calcutta,
Dated the 8th August, 1936.

To

All Members of the Association.

Re Proceedings of the Conference with Merchants held on the 28th and 29th July, 1936, at Calcutta.

In continuation of this Office Circular No. 44 of 1936, dated the 7th July, 1936, I am enclosing herewith a copy of the proceedings of the Conference which the Committee of the Association had with representatives of Sugar Merchants on the 28th and 29th July, 1936, at Calcutta. As you will find from the enclosed proceedings, the Conference had made certain recommendations for changes in some of the existing Standard Contract Form of the Association. This matter is being placed for consideration by Members at the next Annual General Meeting to be held at Calcutta on the 19th August, 1936. Apart from the question of the revision of the Standard Contract Form certain other questions were also discussed at the Conference, decisions relating to which are also included in the proceedings.

I request you to kindly give your careful consideration to the various matters referred to in the proceedings, and particularly to let me know your views with regard to the various changes suggested in the Contract Form, in time to be considered at the Annual General Meeting.

ANNEXURE.

INDIAN SUGAR MILLS ASSOCIATION.

135, Canning Street,
Calcutta,
Dated the 6th August, 1936.

सत्यमेव जयते

Proceedings of the Conference between the Committee of the Indian Sugar Mills' Association and representatives of Sugar Merchants held on 28th and 29th July, 1936, at Calcutta.

Present.

Mr. J. M. Lownie (President, Indian Sugar Mills Association).	(In the Chair).
Mr. B. M. Birla Lala Karamchand Thapar Mr. C. A. Carmichael Mr. J. Aitken	Members of the Committee of the Indian Sugar Mills' Association.
Mr. Hodgson	Representing Messrs. Parry & Co., Madras. (By invitation.)
Lala Pyarey Lall Bhuraria Mr. Pran Nath Sahgal Mr. S. P. Pagey Mr. Manek Lall	Representing the Cawnpore Sugar Merchants' Association.
Seth Parash Ram	Representing Karachi Merchants.
Mr. Santosh Kumar Sreemany Seth Seo Prashad	Representing Calcutta Merchants.

The Conference opened at 11-30 A.M. on the 28th July, 1936. The President at the outset read a telegram received from Mr. J. U. Mulji, President of the Bombay Sugar Merchants' Association, regretting his inability to attend the Conference owing to ill-health. Mr. Maneklal H. Parekh then read out, with the permission of the Chairman, a letter on behalf of the Cawnpore Sugar Merchants' Association in which they stressed the necessity of co-operation of manufacturers and buyers and also put forward certain points for consideration of the Conference on which the following decisions were reached:—

(1) The Cawnpore Sugar Merchants' Association pointed out that in some cases railway authorities made certain remarks, *e.g.*, "Bags not counted", on the railway receipts which went against the interests of the trade. The Merchants urged that the matter should be taken up with the railway authorities and they should be asked not to put such remarks on the railway receipts. It was agreed that the Indian Sugar Mills' Association would take up the matter with the railways on getting full particulars from the Cawnpore Sugar Merchants' Association.

(2) The merchants requested that in the case of goods despatched by steamers, each bag should bear the Invoice No. or any other mark in order to enable buyers at the destination to distinguish their respective goods and take delivery of the same. It was agreed that this suggestion would be recommended to factories for necessary action.

(3) It was suggested on behalf of the merchants that factories should adopt the practice of quoting slightly different prices for wholesale and retail buyers. It was agreed that factories should be recommended to quote slightly higher prices for wholesale quantities amounting to one wagon load (*i.e.*, about 110 bags) or above than for quantities below a wagon load.

A letter from Mr. J. U. Mulji was also read out in which Mr. Mulji had dealt with the various matters coming up for discussion at the Conference.

Consideration of the items on the Agenda was then taken up, the first item being the question of the revision of the Standard Contract Form. The existing Standard Contract Form of the Indian Sugar Mills' Association was then taken up and discussed clause by clause. The following are the decisions reached with respect to each clause:—

SCHEDULE.

Description of quality.—Two alternative proposals were considered by the Conference, *viz.*, that either the factories should adopt the Indian Sugar Standards and sell their sugar on that basis or on the basis of sealed samples given to the buyer. After some discussion the Conference agreed on the following alternatives:—

(*a*) That factories should try to sell their sugar on standards fixed by the Bureau of Sugar Standards which the Indian Sugar Mills' Association agreed to try to get modified to suit their adoption by factories, anything below No. 20 colour standard, to be sold on sample. Where factories consider that they can sell sugar on Indian Sugar Standards, they should make provision accordingly in their contracts.

(*b*) If the above is not possible, each factory should at least have its own standards which it should be able to fix within a fortnight of its starting. Sealed samples of these standards should be supplied to (1) dealers who may have bought sugar from the factory and (2) to the Indian Sugar Mills' Association. In this connection it was agreed that where a factory cannot adopt or fails to adopt a standard due to variation in the size of crystals such variations should not mean cancellation.

Clause (*1*)—*Deposit Money.*—To remain as it is.

Clause (*2*).—It was agreed that in the case of delay in despatching factories should, in their own interest, attach a letter to the railway receipt showing the cause of the delay. The clause was to remain as it is.

Clause (*3*)—*Despatching instructions.*—It was agreed to allow 7 days instead of 3 days to the buyer to send desptching instructions in the case of ready sales. In regard to forward sales, provisions were left as they are.

Clause (*4*)—*Payments.*—It was agreed that the rate of interest which the buyer has to pay to the seller in case of delayed payments for railway receipts, should be 7½ per cent. per annum instead of 9 per cent.

Clause (*5*)—*Options.*—Under the existing clause it is provided that if the buyer fails to carry out all or any of the conditions contained in clauses 1, 3 and 4 above, the seller shall have the option: (1) to cancel the contract or any portion thereof and (2) to sell or re-sell the goods or any part thereof, etc. After a great deal of discussion it was agreed that this clause should be modified in the following manner:—

(*a*) for failure of the buyer to deposit earnest money within the period laid down for such deposit, *i.e.*, in case of default under clause 1, the seller shall have both options, *viz.*, (1) to cancel the contract or any portion thereof and (2) to sell or re-sell, etc.

(*b*) With regard to the failure on the part of the buyer to carry out all or any of the conditions contained in clauses 3 and 4 of the Contract Form, *viz.*, in respect of despatching instructions or payment, the seller shall have option No. (2), *i.e.*, to, sell or re-sell, etc., after giving 7 days notice to the buyer.

Clause (*6*)—*Re-sale.*—This clause *inter alia* provides for the appropriation by the seller of profits, if any, accruing on re-sale. It was agreed that the opinion of the solicitors may be taken as to whether under the common law (Sale of Goods Act) the seller is entitled to appropriate profits.

Clause (*7*)—*Appropriation and Godown rent.*—To remain as it is.

Clause (*8*)—*Quality.*—The question of quality having been discussed in connection with the Schedule abovementioned, it was agreed in accordance with the decision arrived at that the first portion of this clause should be changed so as to provide that goods to be according to sealed samples or according to the Indian Sugar Standards adopted by factories.

Clause (*9*)—*Packing.*—It was agreed that with effect from the season 1937-38 all Member factories of the Indian Sugar Mills Association may be requested to use "A" Twill Bags of the size of 46″ × 26½″ and full 2 mds. 28 srs. of sugar nett.

Clause (*10*)—*Weight.*—To remain as it is.

Clause (*11*)—*Complaints.*—It was agreed that the time allowed for making complaints should be increased from 3 days to 7 days. It was also agreed that this clause may be further modified so as to provide for transport by steamer companies and for Port delivery. It was also made clear that the word "destination" in this clause means the place mentioned as such, in despatching instructions.

Clause (*12*)—*Force Majeure.*—It was agreed that at the end of this clause the following proviso be added:—

> "Provided that within 7 days of such notification the buyer may exercise a similar option of cancellation."

Clauses (*13*), (*14*) and (*15*).—To remain as they are.

Clause (16)—Determination.—It was pointed out that the clause as it stands may conflict with the provisions of clause 5 above. It was suggested that the word "or" occuring in line 1, be deleted and instead the following words be inserted:—

"by reason of his".

It was decided that legal opinion may be taken on this point, before making a change.

Clause (17)—Change in Duty.—It was agreed that legal opinion may be taken as to whether the reference to Customs Duty may be omitted, as there was no question of Customs Duty on sugar produced in the country. The possibility of an export trade developing in the near future was however to be taken into account in this connection.

Clause (18)—Arbitration.—It was suggested on behalf of the Indian Sugar Mills' Association that the manufacturers would agree to arbitration by the Tribunal of Arbitration of the Indian Chamber of Commerce, Calcutta, in the manner detailed below—

> The various Provincial Chambers of Commerce and Sugar Merchants' Associations wherever existing, be requested to form Local Panels of Arbitrators at Calcutta, Bombay, Karachi, Madras, Rangoon and Cawnpore, consisting of an equal number of representatives of manufacturers and Sugar Merchants.
>
> It was also decided that the fees for each single arbitration be fixed at Rs. 200.
>
> At each of these places and at Lahore, Surveyors should be appointed by the Indian Chamber of Commerce, Calcutta, on the recommendation of the Local Chambers and Sugar Merchants' Associations to draw samples in cases of disputes in their respective areas. In case of any dispute referred to the Indian Chamber of Commerce, the Surveyor of the Area should be asked to draw samples from at least 10 per cent. of the bags or, in the case of small consignments from at least 10 bags and sent them on to the respective panel who will be asked to appoint two Arbitrators one representing the manufacturer and the other the Merchants, to make an award on the dispute. It was also decided that provision be made in the Rules of Arbitration for an Umpire in the case of disagreement between the two Arbitrators.
>
> It was pointed out to the representatives of Merchants that arbitration on the above basis would be the only practicable and fair way to deal with disputes. The representatives of Sugar Merchants urged that arbitration should be conducted by one representative each of either party to the dispute assisted by an Umpire if necessary. This was however considered not practicable. The Conference did not come to any definite conclusion on this point, but the Committee of the Indian Sugar Mills' Association agree that the above provision may be substituted in the arbitration clause in the place of the existing one.

Clause (19).—To remain as it is.

The consideration of the question of the revision of the Contract Form having been finished the Conference discussed certain miscellaneous complaints made by the buyers. The following decisions were taken:—

(1) Sugar Merchants urged that information about the starting date of factories should be given to the buyers sometime before the factory starts working. It was agreed that factories should be circularised to inform their buyers about their approximate starting dates.

(2) That every factory should send an acknowledgment of the receipt of despatching instructions.

(3) The representatives of Merchants pointed out that in certain cases the factories while making contracts did not exchange

copies with the buyer. It was agreed to recommend to the factories to exchange contracts, *i.e.*, to give a copy of the contract to the buyer.

The Conference then adjourned with a vote of thanks to the Chair.

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(6) *Letter No. L/8/B/2563, dated the 2nd September, 1937, from the Indian Sugar Mills' Association, Calcutta.*

I am enclosing herewith for your information a copy of a printed note on the question of the possibility of export of sugar from India.

Enclosure.

A CASE FOR THE DEVELOPMENT OF EXPORT MARKETS FOR INDIAN SUGAR.

1.—*Growth of Sugar Industry.*

Though India is the home of sugarcane, and perhaps it was long before the manufacture of white sugar was started in other countries that India was manufacturing sugar by her own indigenous process, so far as modern cane factories are concerned, there were only a small number of these in existence in India before the grant of protection to the Sugar Industry in 1932. The bulk of white sugar required for consumption within the country was imported from outside. There was, however, a very rapid development of the Industry during the years following the grant of protection. Whereas during the year ending March, 1932, there were only 32 factories in India with a total output of 158,581 tons of white sugar, the respective figures for the 1936-37 season just closed were 146 factories working with cane and producing a total estimated quantity of about 11 lakh tons. Apart from sugar produced by modern cane factories, certain quantity of sugar was also produced by the indigenous process, *viz.*, by Khandsaris, and some was refined from Gur. The total quantity of sugar produced during the current season is estimated to be as follows:—

Production by modern cane-factories . .	1,100,000
Khandsari production	100,000
Refined from Gur	32,300
	1,232,300

2.—*Estimated Consumption.*

Though no actual statistics of the consumption of sugar are available, an estimate can fairly be made on the available data of production, imports, etc. During the crushing year (*i.e.*, from 1st November to 31st October following) 1935-36 the total quantity of white sugar produced in India by all methods was 1,166,000 tons and the quantity imported from foreign countries, mostly from Java, was 113,770 tons. The total available quantity of sugar for consumption during the year, therefore, was 1,279,770 tons, of which, it is estimated that about 50,000 tons were carried over to the current year. The total consumption during the crushing year 1935-36 can therefore, be said to be about 1,230,000 tons. Thus, it will be seen that the current year's production of sugar in India is practically equal to the estimated annual consumption.

Within the period of 5 years, therefore, from the grant of protection, a stage has been definitely reached when, though there is actually no over-production as was feared, indigenous production is almost sufficient to meet the annual requirements of the country, even providing for a normal increase in the consumption of sugar on account of the prices having been considerably brought down. Naturally imports of foreign sugar have practically ceased. The total imports of sugar during the financial year 1936-37 have been only 23,075 tons. Even the Tariff Board which recommended protection in 1931 did not foresee such a rapid development of this Industry. This phenomenal growth points out to the great natural advantages which India enjoys in the production of sugar. The temperate-*cum*-tropical climate of India together with the vast stretches of arable land provide an excellent basis for production of sugarcane in this country.

3.—*Necessity of Export Markets.*

With the growth of the modern sugar factories the acreage under cane has also increased from 3,076,000 in 1931-32 to 4,431,000 in 1936-37. It may, however, be pointed out that the modern factories crushed this season only about 16 per cent. of the total quantity of sugarcane grown in India, the remaining 84 per cent. being used either for the manufacture of gur, or for chewing or for agricultural purposes. It is thus clear that there is a vast scope yet for the development of the sugar industry in this country. Not only is the raw material available in an abundant measure but in view of the cane crushing season synchronising with the less busy period for the cultivator, labour is also easily and cheaply available and in sufficient number. A fuller development of the Sugar Industry would thus certainly be a very welcome measure for the amelioration of the condition of a vast number of cultivators. As a matter of fact during the season just over, some difficulty was experienced in the disposal of the entire quantity of cane and the cultivators were put to considerable distress as a result of which it is reported that the sowings for the next crop have been as much as 20 per cent. less than the sowings in the last year. Sugarcane being a paying and a cash crop a large number of cultivators will thus be deprived of the benefit which they would have got from the sugarcane crop. This could be avoided if an outlet for at least a certain quantity of our sugar is assured. It is estimated that to-day about 2 crores of the population of India is dependent on the cultivation of sugarcane. The total amount paid to the cultivators by the factories during the current season is estimated to be about Rs. 846 lakhs. Indeed, the Sugar Industry stands on a footing apart from any other industry so far as its importance to agricultural economy is concerned. No other industry is so directly and so closely dependent in a vast number of agriculturists as this. The utilisation of the resources of the country in this respect to their fullest extent is therefore desirable not only as a logical conclusion of the policy of protection adopted by the Government of India but also as a measure of great benefit to millions of rural population. Such development is, however, dependent on the finding of new avenues for the outlet of the product of this industry.

Apart from these broader considerations, it may also be pointed out that the exports of a small quantity of sugar, say, about two lakh tons actually, will help in maintaining the internal prices at a reasonable level and avoid unnecessary depression in the sugar trade which results in loss both to the large number of investors in the industry and to the merchants. The development of an export market for Indian sugar is, therefore, in the interests of all connected with the Industry, *viz.*, the manufacturers, the growers and the merchants.

4.—*Possible Exports Markets.*

We have now to see as what possible avenues there are for the export of Indian sugar. Though, as is well-known, there is only a very limited free market for sugar in the world, a detailed examination of the position will show that there are certain possible directions in which export markets for Indian Sugar can be developed. There are various neighbouring countries for example, like Ceylon, Nepal, Kashmir, Afghanistan, Iran, etc., which depend for their supply of sugar on foreign and far-off sources.

We give below the figures of annual imports of sugar by some of these and other neighbouring countries:—

——	1934-35.	1935-36.	1936-37.
	Tons.	Tons.	Tons.
Ceylon	65,715	69,323	75,994
Iran	39,103	43,807	59,932
*Arabia	2,295	1,533	9,404
*Aden	14,153	8,375	12,505
*Somaliland	1,684	946	51
*Mesopotamia	...	2,729	7,854
*British East Africa	3,532	2,814	4,000
*Siam	32,008	32,365	33,055

N.B.—Figures relating to countries marked (*) are for 12 months from May to April following, and are for quantities imported from Java only.

We are also giving below the quantity of sugar transported from India to the neighbouring countries across the land frontier for the last 3 years, almost all of which is foreign sugar re-exported to the countries mentioned:—

Destination.	1934-35.	1935-36.	1936-37.
	Tons.	Tons.	Tons.
Group (*a*)	6,124	3,809	4,371
Group (*b*)	24,083	18,121	22,424
Group (*c*)	3,500	3,563	3,555
Total	33,706	25,493	30,350

NOTE.—Group (*a*) includes trade with Iran and Western and Southern Afghanistan; Group (*b*) includes trade with Northern and Eastern Afghanistan, with Kashmir and through them with Central Asia and Turkistan; and Group (*c*) comprises the trade with Tibet, Nepal, Sikkim and Bhutan.

It will thus be seen from the above figures that there is a considerable scope for Indian sugar in the neighbouring markets which at present derive their supplies from foreign sources.

5.—*The United Kingdom Market.*

In addition to the above neighbouring markets, however, there is one other large and potential market which could be tackled, *viz.*, the United Kingdom. United Kingdom to-day constitutes one of the largest free markets for sugar in the world. The annual consumption of sugar in United Kingdom for the past 3 years expressed in terms of raw sugar has been as under:—

Year.	Tons.
1934	2,200,435
1935	2,216,415
1936	2,323,345

Great Britain has also got some export trade in refined sugar with certain continental countries. To cater for all these requirements United Kingdom imported 1,963,677; 1,972,446 and 2,048,940 (for 11 months, January, 1936, to November, 1936) tons respectively during the last 3 years apart from producing 545,077, 611,092 and 521,357 tons (raw sugar value) respectively within the country from home-grown Beet during the same period. This large quantity is annually imported by United Kingdom in the shape of raw sugar (*i.e.*, sugar of 96° polarisation) and is refined within the country and turned into white sugar. More than half of this quantity of annual imports of raw sugar comes from "foreign" sources while the rest is imported from "Empire" sources (including "colonial"), like Queensland, Natal, West Indies, Mauritius, Fiji, etc. The exports of sugar from Empire sources to United Kingdom have been to the extent of 751,000 tons in 1934, 851,000 tons in 1935 and about 1,000,000 tons in 1936 the remaining being imported from foreign sources.*

Empire grown sugar is given a preference in the United Kingdom market over "foreign" sugar. Thus whereas the duty on foreign sugar of 96° polarisation (raw sugar), in United Kingdom is 8*s*. 4·3*d*. per cwt. "Empire" sugar has to pay only about half the above rate, *viz.*, 4*s*. 6·3*d*. per cwt. Even within the Empire however, certain countries are given a further preference in order to help the colonial sugar planting interests and sugar coming from these countries is admitted at 1*s*. 5·3*d*. per cwt.† This "preference within preference" is for example, enjoyed by Mauritius, and now that India is in a position to export sugar special preference must be given to Indian sugar in the United Kingdom market and a specified quota allotted to it. Indian sugar if exported to United Kingdom will at present have to pay the same import duty as "Empire" sugar but considering the intimate economic relationship between these two countries there is no reason why Indian sugar should not be given a special preference and an arrangement made so as to enable a fixed quantity to be imported yearly into United Kingdom, if not free of import duty at least on payment of the duty at the certificated colonial rate.‡ Great Britain is already giving a special treatment to its colonial cane planters and considering the large number of Indian agriculturists whose welfare depends on the prosperity of the Sugar Industry in India the Government of United Kingdom should be urged to allow India to participate in her (the former's) sugar import trade at least to a certain extent. The scheme of Imperial Preference is already in force and if the manufacturing interests of United Kingdom are given special preferences in the Indian market, surely the sugar manufactured in India can demand a similar treatment in the United Kingdom market. In the interests of a vast number of agricultural population as well as in the interests of the stability of an important national industry it should be the duty of the Government of India to secure a proper share for Indian Sugar in the United Kingdom market. Negotiations are at present going on for the conclusion of a trade agreement between United Kingdom and India and this opportunity should be utilised for securing a definite export quota for Indian Sugar in the United Kingdom market. As has been shown above, United Kingdom still depends for a large quantity of its sugar supplies upon foreign sources and the export of sugar from

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* By the recent International Agreement drawn up at the World Sugar Conference held in London, Great Britain has agreed to limit her annual production of sugar to a standard quantity of 560,000 long tons of white sugar (*i.e.*, approximately 618,000 metric tons raw value) and her imports from the British Colonial Empire to a basic figure of 965,254 metric tons per year.

† The import duty on refined sugar, *i.e.*, on sugar exceeding 99° polarisation is as follows:—11*s*. 8*d*. on foreign, 5*s* 10·0*d*. on Empire and 2*s*. 4·7*d*. on "Colonial" sugar.

‡ Please see Appendix at the end.

India will thus not only be in the interests of the latter but would also make United Kingdom increasingly independent of its sugar requirements on foreign sources.

6.—*Arguments against Export.*

The main argument so far advanced against the export of sugar from India is that the cost of production in this country is higher than in any other great sugar producing countries of the world, as remarked by the *Hon'ble* Sir Md. Zafrullah Khan in reply to the question put in the Legislative Assembly on the 30th March last by Seth Govind Das and Dr. N. B. Khare. This argument, however, does not stand scrutiny. It must be remembered that for export purposes we do not need white sugar but only raw sugar of 96° polarisation and the process of manufacture of raw sugar being simpler than the process of manufacture of white sugar and the recovery percentage greater than in the case of the white sugar and the recovery percentage greater than in the case of the latter, the cost of production of raw sugar would be lower than the present cost of production of white sugar. The current c.i.f. price of raw sugar in the United Kingdom ports is about *6s. 8d.* per cwt. whereas the price of Indian raw sugar at the factory would be about Rs. 4 per maund on the present average cost of raw material, *i.e.*, *8s. 2d.* per cwt. without Excise Duty. But, as is well-known, the cost of production of sugar has been considerably brought down in the last 5 years, in some cases as much as by more than half. The efficiency of Indian factories has also been improving every year as testified by the periodical reports issued by the Director of the Imperial Institute of Sugar Technology. It is true that, as pointed out by the Hon'ble the Commerce Member in the Legislative Assembly in reply to the question above referred to, any appreciable reduction in the present cost of production of sugar depends now to a greater extent upon improved quality and reduced cost of sugarcane, but there is no reason why with the combined efforts of the Agricultural Departments on the one hand and the Industry on the other and also of the Government of India in making it possible for the factory-owners to utilise their by-products, it should not be possible to reduce the cost of production of sugar still further in a short time. Moreover, while comparing the c.i.f. prices of the sugars of different countries in a particular market with the present c.i.f. cost of Indian Sugar in that market, we forget that foreign sugars enjoy many special advantages of freight rates, etc., due to an already established large export trade, which Indian sugar does not enjoy at present.

But apart from these facts, it must be borne in mind that the actual internal cost of production is not a very important factor these days so far as the development of export markets is concerned. This will be apparent from the fact that the internal prices of sugar in the various countries to-day have little relation to world prices, *i.e.*, prices for export sugar in the free markets. It will perhaps be surprising to find that retail prices of sugar in certain countries are several times higher than the world sugar prices. In most of the countries of Europe retail prices range between Rs. 15 and Rs. 33 per maund whereas in the Soviet Russia the retail price is as high as Rs. 77 per maund and yet most of these countries and others have been allotted export quotas in the free world market at the recent World Sugar Conference. Indeed, in India the retail prices of sugar are the lowest in the world, except in Java, Cuba and Brazil.

Examples may be multiplied to show what little part cost of production plays in international trade which is now-a-days largely regulated by tariffs, quotas and preferences. Thus, even if the cost of production of sugar in India would have been higher, than what it is to-day that could hardly be any reason for the Government of the country, charged with the welfare of the masses, to refuse to countenance the possibility of the development of an export market for Indian sugar particularly when such a thing is reasonably feasible. Moreover, considering the question with reference to the particular possible export markets for Indian sugar pointed out above, it may be noted that while in the case of the neighbouring markets Indian sugar will have the advantage of nearness over foreign competitors, in the case of the United Kingdom market India can legitimately claim special preference as explained above. United Kingdom already pays an indirect premium on higher cost of production to its colonial cane planters by giving them a special preferential duty on raw sugar imported from those countries and keeping in view the close economic and political relationship between India and United Kingdom, the former can legitimately claim and the latter can be persuaded to give a share of its import market to India.

7.—*Recent Ban on Export of Sugar.*

It is regrettable however, that the attitude which the Government of India have so far adopted on the question of the export of sugar from India has not been very helpful. It appears that the Government have not given serious consideration to the possibility of such export. This has been exemplified by the light manner in which they handled the situation with regard to the recent International Sugar Conference held in London. In spite of the fact that the Industry invited their attention in time and repeatedly, the Government of India did not see their way to appoint any accredited representative of the industry to attend the World Conference and represent the case of India in the light of actual conditions obtaining in the industry. It is true that at that particular time India was not an exporting country but it was obvious that with the rapid progress that the Sugar Industry is making and with the indigenous production having already reached the level of consumption, the question of export of sugar was sure to crop up in immediate future. The Government of India however appointed only an official to represent India at the International Sugar Conference. The Indian Sugar Industry was thus deprived of representing their full case before the International Sugar Conference with the result that by the terms of the International Agreement which was arrived at at the Conference it is proposed to put a ban on the export of sugar by sea from India except to Burma during the currency of the agreement, that is, for the next five years. Five years is too long a period and it is obvious that there are bound to be many important development so far as this industry is concerned. The country can therefore in no case agree to any such restriction being placed on this important industry.

The necessity of developing export markets has already been brought out fully above. It will be against the interests of not only the manufacturers and the traders but also of a large number of cultivators if any handicap is placed in the way of such development. We cannot reconcile ourselves with the fact that the Indian Legislature will allow the growth of this second largest industry of the country to be stifled like this and are sure that they will refuse to ratify the International Agreement when it comes before them.

8.—*Pre-requisities of Export.*

It must now be clear by the facts and figures given above that it is essential in the interests of the country to explore the possibilities of the export of sugar and that there are certain possible markets which should be tackled. The question of export is, however, a new one and requires careful planning and sympathetic consideration by the Government. As already pointed out above there are reasonable chances of the development of an export market for sugar. There are, however, certain factors which must be tackled to make such exports possible.

(*a*) The first thing which is to be considered is the question of internal freight rates, *i.e.*, railway freights, from the sugar factories to ports and to such land frontier stations from which sugar is exported. Most of the sugar factories in the country are situated in the two provinces, the United Provinces and Bihar, and the present average freight from a factory in these two provinces to the ports is about Re. 1 per maund. The present rates, however, are fixed in consideration of internal movement of sugar only and have no relation to exports. It is obvious that for consignments of sugar meant for export outside the country, the railways will have to quote specially reduced rates, as they are doing for the export of wheat from Karachi and of Petrol from the North-Western Frontier to Afghanistan. It must be remembered that in both Java and Cuba, two of the largest exporting countries of the world, factories are situated within a few miles from the sea and hence the cost of transport from the factories to the steamer is very negligible, in most cases the factories having their own private arrangements for such transport. The railways in this country must co-operate with the industry by offering special rates for sugar meant for export.

(*b*) The question of ocean freights will also have to be tackled. At present there is no export trade in sugar from India and hence the quotations are only nominal. It is presumed, however, that with the chances of an appreciable export trade developing, the steamer companies could be prevailed upon to offer specially low rates and thus profit by a traffic which does not exist at all for the present.

(*c*) Apart from these questions of freight, the other important point which the Government of India have to tackle is about the import duty on Indian sugar in the United Kingdom. As has been pointed out above, and in greater detail in the Appendix, it can be possible to export Sugar from India to United Kingdom, if Indian sugar is given the same preference in the matter of import duty as "certificated colonial". The Government of the United Kingdom should be strongly pressed to do so.

(*d*) Another point which requires consideration is in connection with the excise duty. Under the present provisions, excise duty is to be paid on all issues of sugar from the factory. However, sugar which is meant for export by Sea is exempt from the payment of excise duty. But this concession does not extend at present to sugar which is to be exported by land, though a refund of the amount of the excise duty may be obtained on proof of such export. It is desirable that in order to facilitate export trade with the neighbouring countries across the land frontier, the provision about the exemption from payment of excise duty should also be extended to sugar issued out of the factories for such export.

(*e*) Apart from these specific measures, however, it is also desirable that the Trade Commissioners appointed by the Government of India in various foreign countries should also actively interest themselves in the promotion of export trade in Indian sugar.

9.—*Conclusion.*

It is earnestly hoped that the Government of India and the Legislature will give careful consideration to all these points and help in the growth and the stabilization of this important national industry which involves the interests of millions of people, by helping in the development of an export market for Indian Sugar.

APPENDIX.

Note on the possibility of export of sugar from India into the United Kingdom.

The total consumption of sugar (raw value) in United Kingdom has been about 2 million tons annually. Since 1928, nearly all the sugar used for household or manufacturing purposes in United Kingdom has either been produced within that country itself from Beet or has passed through its final process of refinement there. The production of home-grown sugar from Beet has been between 3 to 4 lakh tons (raw value) for the last 3 years and with the exception of this quantity and the very small amount of refined sugar imported from abroad, the remaining quantity required for consumption is refined in United Kingdom from imported sugar.

The total imports of raw sugar into United Kingdom during the last several years have been about 2 million tons annually of which about ⅔rds have been from "foreign" sources while slightly more than ⅓rd have been from "Empire" countries (including "Colonial") like Queensland, Natal, West Indies, Mauritius and Fiji.

As mentioned above most of the imports into United Kingdom are of raw sugar, *i.e.*, of 96° polarisation. The seller's price of each of the three classes of raw sugars, *viz.*, Foreign, Empire and Colonial, in the United Kingdom port markets are, according to a recent estimate, as follows:—

—	C.i.f. Seller's rates per cwt.	Import duty per cwt.	Seller's prices at port markets after paying import duty.
	s. d.	*s. d.*	*s. d.*
Foreign . . .	6 8	8 4·3	15 0·3
Empire . . .	10 5	4 6·3	14 11·3
Colonial (Mauritius) .	11 1	1 5·3	12 6·3

On the present basis the average cost of sugar of 96° polarisation may be taken to be about Rs. 4 per maund, at factory without Excise Duty. The present freight rate from Port to Port between India and United Kingdom is about 40*s.* per ton or 2*s.* per cwt. To this, is to be added the freight from factory stations to Indian Ports, *plus* the port charges, etc., which may be taken to be about 13 annas per maund (12 annas freight and 1 anna port charges, etc.). On this basis, therefore, the c.i.f. prices of Indian raw sugar at the United Kingdom Ports will be as follows:—

	Rs. a. p. per maund.	Rs. a. p. per cwt.
Cost of production of 96° polarisation sugar at factory (without excise duty)	4 0 0	5 7 6
Freight from factory to port including port charges . . .	0 13 0	1 1 8
Freight from Indian port to United Kingdom Port	..	1 5 4
C.i.f. Price of Indian sugar at United Kingdom Ports . . .		7 14 6 per cwt. or 11*s.* 10·4*d.* per cwt.

It is thus apparent that the c.i.f. price of Indian sugar at the United Kingdom Ports, even on the present basis of internal and ocean freight rates, would not be very much higher than the c.i.f. prices of Empire and Colonial sugars at these ports. As against 10*s*. 5*d*. and 11*s*. 1*d*., being the c.i.f. prices per cwt. for Empire and Colonial sugars, the c.i.f. price of Indian Sugar at the United Kingdom Ports will be 11*s*. 10·4*d*. per cwt. United Kingdom can therefore easily import at least a certain fixed quantity of Indian sugar at competitive prices by allowing it the same preference as is given to certified colonial sugar, *i.e.*, charging the same rate of import duty as on the latter, *viz.*, 1*s*. 5·3*d*.

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(7) *Letter dated the 11th October, 1937, from Indian Sugar Mills' Association, Calcutta.*

As promised at the time of the Oral Evidence, I am sending herewith a note on the "fair selling price of sugar".

Enclosure.

INDIAN SUGAR MILLS ASSOCIATION.

135, Canning Street,
Calcutta,
Dated the 11th October, 1937.

Note regarding the fair selling price of sugar.

The Committee of the Association have considered this matter carefully and they give below the detailed statement as regards the fair selling price of sugar which may be taken into account in the calculation of the rate of protection:—

	Rs.	A.	P.
1. Cost of 11 maunds of sugarcane at As. 5-6 per maund	3	12	6
2. Manufacturing and overhead charges including depreciation, etc.	2	4	0
3. Manufacturer's profit	1	0	0
Total .	7	0	6
4. Railway freight from United Provinces and Bihar to Ports	1	1	6
	8	2	0
5. As. 8 per maund for difference of quality in comparison to Java	0	8	0
Fair selling price of Indian sugar at Port markets	8	10	0

The Committee would like to make certain comments on the above items in order to explain how the particular figures have been arrived at:—

(1) (*a*) The Committee have taken 11 as the factor for the conversion of sugarcane into sugar, *i.e.*, 11 maunds of sugarcane for one maund of sugar. This means an average recovery of slightly over 9 per cent. As submitted at the time of the oral evidence though the average recovery

during the last season was 9·5 per cent., looking to the many chance factors on which the success of the crushing season and the recovery depends it is desirable to take 11 as the average factor for the conversion of sugarcane into sugar.

(b) As regards the cost of sugarcane, the Committee have taken the figure to be As. 5-6 per maund *delivered at the factory gate* having regard to the fact that the level of protection is going to be fixed once for 8 years to come and nobody can be certain as to the actual minimum prices which the Congress Ministries in United Provinces and Bihar may fix from time to time and also that due to the uncertainties of the International situation the prices of other commodities may rise at any moment raising the price of sugarcane.

However, this figure of As. 5-6 per maund should not be confused with the Association's recommendations about the minimum price of sugarcane to be fixed by the Governments of United Provinces and Bihar. As regards the minimum price, the Committee may reiterate, that whereas a price below 4 annas would not be attractive enough for the cultivator and would result in bringing down the area under cultivation, an excessive price is also not desirable inasmuch as,—

(a) if the price of cane were fixed at a high level it would lead to overproduction and to the same undesirable consequences as occurred during the last season and hence would go against the interests of the ryots themselves.

(b) The United Provinces and Bihar factories together produce about 85 per cent. of the total production of sugar in India. United Provinces and Bihar factories have already got a disadvantage in railway freight from about Re. 1-8 to Rs. 2-8 as compared to Madras and Bombay factories and if the price of cane is fixed at an excessive level it will put a further handicap in the way of these factories and would give an artificial stimulus to the establishment of factories in other Provinces and Indian States which would be against the interests of the Industry as a whole.

Considering all these facts, therefore, the Committee are of opinion that the maximum limit for the minimum price of sugarcane should in no case be beyond 5 annas per maund.

(3) *Manufacturers Profit.*—This figure has been arrived at on the basis of a 10 per cent. return on the original block of an average factory.

(4) As the Board are aware, United Provinces and Bihar together produce about 85 per cent. of the total Indian production and hence United Provinces and Bihar sugar has to be marketed in distant markets. For purposes of protection, however, we have taken the average freight only to port markets. These are concessional rates given by the Railways only for the Ports. The fair selling price of Indian sugar at port markets, therefore, should be taken to be Rs. 8-10 per maund. It must be borne in mind that this is "fair selling price" and should not be confused with the actual price, whether present or past.

The present rate of protection is Rs. 7-4 per cwt. (not taking into account the surcharge equivalent of excise which has been omitted from the previous calculation) or about Rs. 5-5 per maund. The cost of production of sugar in Java including the cost of cane is, according to a recent calculation, about Rs. 2-6 per maund. To this is to be added annas 6 per maund for Insurance, freight, etc., and one anna per maund as landing charges. It will, thus be seen that Java can land its sugar in India at Rs. 2-13 per maund. Taking the fair selling price of Indian sugar at Rs. 8-10 as shown above, protection up to the rate of Rs. 5-13 is justifiable. The present protection is Rs. 5-5 per maund and therefore the industry is not in any way unjustified in demanding the continuance of protection at the present level.

(8) *Letter No. 831, dated the 16th October, 1937, from the Secretary, Tariff Board, to the Secretary, Indian Sugar Mills' Association, Calcutta.*

With reference to this office letter No. 810, dated the 14th instant, enclosing the record of evidence tendered by the representatives of your Association I am desired to say that it is not proposed to publish the complimentary statements made towards the end of the proceedings of the 4th October and the record of which is typed from the top of page 276 to the bottom of page 278. This portion of the note may therefore be considered deleted.

2. During the course of evidence information was promised on several points which I note below and on which information may kindly be sent at an early date—

(1) A revised list of the sugar mills in India and those actually working.*

(2) A revised list of the mills which may be taken as representative and a revised statement of the expenditure on production.†

(3) A list of the factories together with their numbers referred to in the Appendix to the Sugar Mills' reply.*

(4) Number of mills which are Private Limited and the numbers which are Public Limited Companies and factories which have distilleries attached to them.

(5) Dr. Neilsen promised to supply figures of the total number of mills in Java, the total number working in each of the last seven years and their capacities. He has supplied information up to the year 1933; subsequent information may also kindly be furnished.

(6) A note on the Government assistance to be given for acquisition of land by factories and for what purpose.

(7) A statement showing railway freight from factories to the various ports.

(8) Statement showing block capital required for an economic factory and the manufacturing charges for such factory.

(9) A note on the Sugar Syndicate with portions which are to be considered confidential marked.

(10) A note on the minimum prices of cane fixed by United Provinces and Bihar for the current season when these prices have been fixed.

(11) Cost of manufacture of raw sugar 96° polarization.

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(9) *Letter No. TBE/570, dated the 25th October, 1937, from Indian Sugar Mills' Association, Calcutta.*

I acknowledge with thanks the receipt of your letter No. 831 of the 16th October, 1937, in which you have given a list of the various items of the information which is to be submitted to the Tariff Board. The information with regard to most of the items is almost ready and will be sent to you as soon as possible.

As regards items Nos. 9 and 10, I am sending to you herewith a note on the Syndicate and (*b*) copies of the draft notifications issued by the Governments of United Provinces and Bihar with regard to the minimum price for cane for the coming season. As regards the note on the minimum price, these draft notifications are still under the consideration of the Committee and I shall send to you a note as soon as the views of the Committee are finalised.

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* Printed at the beginning of the volume.

† Not printed.

Enclosure No. 1.

INDIAN SUGAR MILLS ASSOCIATION.

Dated the 17th October, 1937.

Note on the Indian Sugar Syndicate, Limited.

The Syndicate was started early in July, 1937. Ninety-two factories representing about 75 per cent. of the total crushing capacity of all the factories in India are at present members of the Syndicate. The Syndicate purchased from all its member factories their unsold stocks of sugar as on the date of the commencement of business. The rates at which the Syndicate purchased the sugars of its Members were originally fixed on the basis of the average prices prevailing during the 1st fortnight of March, 1937. But as the prices had fallen between the first fortnight of March and the date of commencement of the Syndicate's business in July, the basic prices were subsequently uniformly reduced by 3 annas per maund though the actual fall was still larger. The basic prices, as the purchase prices are called, were fixed in respect of the different qualities of sugar of each member on the market parity. The total quantity of sugar purchased by the Syndicate was 5,428,000 maunds or about 2 lakhs tons.

The stocks of sugar purchased by the Syndicate are, however, kept as before with the factories who are trustees for the Syndicate and are responsible under the Articles for any deterioration in quality, etc. The sugar purchased by the Syndicate has to be sold as per orders and directions of the Syndicate from time to time. The method adopted by the Syndicate for the sale of this sugar is as follows:—

The Syndicate fixes a certain percentage of the total stocks of sugar which it has bought, which is to be sold by factories during a certain fixed period (which is called the selling period) and at not lower than the selling rate fixed for that period by the Syndicate. The selling period is usually a fortnight or a month. The selling price is fixed as a uniform variation of the basic price in the case of each factory and its different qualities. The selling price has so far been either fixed at par with the basic price or a few annas higher than the basic price from period to period. To take a concrete example, the Syndicate may fix a fortnight as the selling period and direct the factories to sell during that period, say, 10 per cent. of the Syndicate's sugar held by them. If in the case of a member factory the stock which has been sold by it to the Syndicate is 1,000 bags, it will be required to sell 100 bags, and not more, during the fortnight at the rate fixed by the Syndicate for its particular sugar. If the factory sells below the selling price fixed by the Syndicate it has to pay the difference to the Syndicate as well as a penalty. If the factory is able to obtain a better rate than the selling price fixed by the Syndicate it is entitled to keep the difference to itself provided it has been able to clear off its full quota during the period. The selling machinery of each individual factory, *viz.*, its selling agents, etc., remains what it was before the Syndicate was started. The selling commission and other charges, etc., have to be borne by each factory.

The present is the fifth selling period (ending on 7th November, 1937) since the commencement of the Syndicate. Up to the end of the 4th period (September 30th) the Syndicate had given orders for the sale of 37½ per cent. of its total purchases. The quantity actually sold up to this date was however 972,190 maunds, or 17·6 per cent. of the originally purchased quantity. This slow offtake during the last three months appears to be the fact that apart from the 2 lakhs tons of Syndicate sugar there was an equal quantity of sugar, sold and unsold, with non-member factories, and "sold and undelivered" with Members to be passed on in consumption and this quantity naturally got preference over the Syndicate sugar which was being sold under strict regulations as regards the rate and quantity.

The Syndicate is a company limited by guarantee and has no share capital. The Syndicate's accounts for the present year will close on the 30th November, when the profit, if any, is to be divided among the members, *pro rata*, of the quantity of sugar of each member sold through the Syndicate. The maximum liability of a member under the guarantee is Re. 1 per maund under the original memorandum of Association which is now in force at present.

As regards the next season, it is intended to make certain important changes in the working of the Syndicate. The intention is that the Syndicate will not only be a Central directing body but will be actually responsible for selling all the sugar of its members through its own organisation if the Board of Directors so decide. Another provision which is made in the new articles is that loss, if any, in any season, is to be made good by each factory contributing annas four only per maund of sugar sold to the Syndicate for that season. A copy of the Memorandum and Articles of Association in force at present and also copy of those which it is proposed to adopt for the next season are appended herewith.

Enclosure No. 2.

UNITED PROVINCES GOVERNMENT.

Draft Amendment dated the 8th October, 1937.

(*a*) *Delete* sub-rule (2) of Rule 7 and the proviso and explanations thereto and *insert* the following as sub-rule (2):—

"(2) In the case of cane purchased for vacuum pan factories, the minimum price shall be five annas and three pies per standard maund of $82\frac{2}{7}$ lbs. avoirdupois, except in respect of purchases made at a railway station for transport by rail to factories situated at a distance of not less than five miles from such railway station, in which case the minimum price shall be five annas per standard maund of $82\frac{2}{7}$ lbs. avoirdupois."

(*b*) For sub-rule (3) *substitute* the following:—

"(3) In the case of cane purchased for open pan factories the minimum price shall be two-thirds of the minimum prices mentioned in sub-rule (2)."

Enclosure No. 3.

Draft Notification.

The Government of Bihar are pleased to fix in all controlled areas from the beginning of the next crushing season till the 15th December, 1937, or until further notification, the minimum prices shown below for the purchase of sugarcane intended for use in any factory:—

(i) For sugarcane intended for use in a factory which is worked by the vacuum pan process, the minimum price shall be five annas and three pies per standard maund of $82\frac{2}{7}$ lbs. avoirdupois, except in respect of purchases made at a railway station for transport by rail to factories situated at a distance of not less than five miles from such railway station in which case the minimum price shall be five annas per standard maund of $82\frac{2}{7}$ lbs. avoirdupois.

(ii) For sugarcane intended for use in a factory which is worked by the open pan process, the minimum price shall be ⅔rd of the minimum prices mentioned in (i) above.

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(10) *Letter No. TBE/2/572, dated the 26th October, 1937, from Indian Sugar Mills' Association, Calcutta.*

With reference to your letter No. 831 of the 16th October, 1937 (item No. 4), I am sending herewith a list of sugar factories in India who have got distilleries also attached to them. The list is exhaustive so far as replies are received in this Office. In case any further information is received in this connection I shall pass on the same to you.

Enclosure.

List of Distilleries in India.

* Members of the Association.

1. *Marhowrah Sugar Factory of Cawnpore Sugar Works, Ltd., Marhowrah, Saran.	Messrs. Begg Sutherland & Co., Ltd., Cawnpore.
2. *Rosa Sugar Works and Distillery of Carew & Co., Ltd., Rosa, Shahjahanpur.	Messrs. Lyall Marshall & Co., Calcutta.
3. *Cawnpore Sugar Factory of Cawnpore Sugar Works, Ltd., Cooperganj, Cawnpore.	Messrs. Begg Sutherland & Co., Ltd., Cawnpore.
4. *The Deccan Sugar & Abkhari Co., Ltd., Samalkot, E. Godaveri.	Messrs. Parry & Co., Madras.
5. *The East India Distilleries & Sugar Factories, Ltd., Nellikuppamm, S. Arcot.	Ditto.
6. Al. Vr. St. Sugar Mills and Distillery, Tachanalur, Tinnevelly.	Al. Vr. St. Veerappa Chettiar, Devakottah.
7. *Mysore Sugar Co., Ltd., Mandya, Mysore State.	H. O. Santhi Bhawan, Sheshadri Road, Bangalore.
8. The Pattoki Sugar Works, Pattoki, Lahore.	Owned by the Amritsar Distillery Co., Ltd., Amritsar.
9. Gaekwar Sugar Works & Distillery, P. O. Gandevi, Surat.	Proprietor, Seth Shivchandra Radhakisan, P. O. Gandevi, Surat.

सत्यमेव जयते

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(11) *Letter No. TBE/2/5011, dated the 26th October, 1937, from the Indian Sugar Mills' Association, Calcutta.*

With reference to item No. 7 of your letter No. 831 of the 16th October, 1937, I am sending to you herewith a statement showing freight rates of sugar from all the factory stations on the Bengal and North-Western Railway in United Provinces and Bihar to the ports of Bombay, Madras, Calcutta and Karachi.

Enclosure.

Statement showing freight rates on sugar from some internal stations to ports.

Stations to

Stations from	Bombay *viâ* Allahabad City and Naini.			Howrah *viâ* Mokameh Ghat.			Karachi *viâ* Cawnpore, Anwarganj, Kuchaman Road and Hyderabad (Sind).			Madras and *viâ* Mokameh Ghat, Asansol and Waltair.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Babhnan	1	0	9	0	13	4	1	0	3	1	1	6
Baitalpur	1	0	0	0	11	3	1	1	0	1	0	6
Balarampur	1	1	3	0	14	3	1	0	0	1	2	0
Barhni	1	1	3	0	13	7	1	0	0	1	1	3
Basti	1	0	3	0	12	5	1	0	6	1	1	0
Bhatni	1	0	0	0	11	0	1	1	0	1	0	3
Biswan	1	0	8	0	14	2	1	0	8	1	4	4
Campierganj	1	0	6	0	12	6	1	1	6	1	1	0
Captainganj	1	0	6	0	12	8	1	1	9	1	0	6
Chakia	1	1	3	0	10	4	1	2	0	1	0	0
Chanpatia	1	2	0	0	11	5	1	2	3	1	1	0
Chhitauni	1	1	6	0	13	6	1	1	9	1	1	6
Gauribazar	1	0	0	0	11	5	1	1	0	1	0	6
Ghughli	1	0	9	0	13	0	1	1	9	1	0	6
Harinagar	1	2	6	0	11	8	1	2	6	1	1	6
Harkhua	1	0	6	0	10	11	1	1	3	0	15	9
Hassanpur Road	1	1	0	0	9	5	1	2	6	0	15	5
Hathua	1	0	6	0	10	8	1	1	3	0	15	9
Jarwal Road	1	1	11	0	13	11	1	0	0	1	2	6
Jhusi	0	13	1	0	12	7	1	12	4	1	2	3
Kath Kuiyan	1	0	8	0	12	1	1	1	6	1	0	0
Khada	1	1	3	0	13	2	1	1	9	1	1	0
Lakshmiganj	1	0	7	0	12	6	1	1	6	1	0	3
Lohat siding	1	1	6	0	9	10	1	2	3	0	15	10
Maharajganj	1	3	5	0	10	6	1	13	7	1	1	1
Mairwa	1	0	3	0	10	9	1	1	3	1	0	0
Majhowlia	1	1	9	0	11	2	1	2	3	1	0	0
Marhowrah	1	0	6	0	9	11	1	1	6	0	15	6
Motihari	1	1	6	0	10	10	1	2	0	1	0	0
Motipur	1	1	0	0	9	11	1	1	9	0	15	11
Munderwa	1	0	3	0	12	4	1	0	6	1	1	0

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Statement showing freight rates on sugar from some internal stations to ports—contd.

Stations to

Stations from	Bombay *viâ* Allahabad City and Naini.			Howrah *viâ* Mokameh Ghat.			Karachi *viâ* Cawnpore, Anwarganj, Kuchaman Road and Hyderabad (Sind).			Madras and *viâ* Mokameh Ghat, Asansol and Waltair.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Muzaffarpur	1	0	9	0	9	6	1	1	9	0	15	6
Narkatiaganj	1	2	3	0	11	7	1	2	6	1	1	3
Nawabganj (Gonda)	1	1	0	0	13	7	1	0	0	1	1	9
Nirmali	1	10	4	0	11	11	2	4	7	1	0	5
Pachruki	1	0	3	0	10	5	1	1	3	0	15	9
Padrauna	1	0	8	0	12	3	1	1	6	1	0	0
Pharenda	1	1	0	0	12	10	1	1	6	1	1	0
Pipraich	1	0	3	0	12	2	1	1	9	1	0	6
Ramkola	1	0	7	0	12	6	1	1	6	1	0	3
Riga	1	1	9	0	10	7	1	2	3	1	0	7
Sagauli	1	1	9	0	11	1	1	2	3	1	0	0
Sakri	1	1	3	0	9	8	1	2	0	0	15	8
Samastipur	1	0	9	0	8	5	1	2	0	0	14	5
Sardarnagar	1	0	0	0	11	6	1	1	0	1	0	6
Sasamusa	1	0	6	0	11	3	1	1	3	0	15	9
Savan	1	0	3	0	10	7	1	1	3	0	15	9
Semapur	1	5	7	0	9	8	1	14	8	1	1	6
Shahganj		...			...			...			...	
Sidhwalia	1	0	6	0	10	6	1	1	3	0	15	6
Siswa Bazar	1	1	0	0	13	1	1	1	9	1	0	9
Sitalpur	1	0	6	0	9	5	1	1	6	0	15	6
Tahsil Deoria	1	0	0	0	11	2	1	1	0	1	0	3
Tamkukhi Road	1	0	9	0	11	8	1	1	3	1	0	0
Tarasarai	1	1	0	0	9	6	1	2	0	0	15	6
Walterganj	1	0	6	0	12	9	1	0	3	1	1	3

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(12) *Letter No. TBE/600, dated the 30th October, 1937, from the Indian Sugar Mills' Association, Calcutta.*

With reference to item No. 8 of your letter No. 831 of 16th October, 1937, I am sending herewith a statement showing a rough estimate of the Block required for the erection of a factory at present with a capacity of 500 tons of cane daily. For the sake of facility and comparison the relevant figures given in the last Tariff Board's Report have also been shown against each head. The Schedule has been taken as appearing in Appendix III of the last Tariff Board's Report.

Abstract Estimate for a Sugarcane Factory.

—		1931 estimate for a factory with a capacity of 1,300,000 maunds of cane per season.		1937 estimate for a factory with a capacity of 500 tons of cane daily.	
		Rs.	Rs.	Rs.	Rs.
1. Site			17,000		25,000
2. Railway Sidings			25,000		33,000
3. F.o.b. cost of plant £52,000		6,76,000		8,80,000	
Ocean freight, insurance and duty at 20 per cent.		1,35,000		2,20,000	
Inland railway freight at Re. 1 per maund		35,000		52,000	
Erection of plant		40,000		60,000	
Workshop tools		12,000		18,000	
			8,98,000		12,30,000
4. Factory boundary wall			10,000		13,000
5. Stores		6,254		15,000	
Clarification house (90′ × 46′ × 34′) and (35′ × 46′ × 52′)		13,206		22,000	
Mill house (101′ × 52′ × 28′)		15,397		30,000	
Boiler house (92′ × 64′ × 32′)	Rs. 6,548				
Installing boilers, *i.e.*, foundations, brick works, etc.	13,594				
Installing one Lancashire boiler	1,839				
Flues	1,492	23,473		30,000	
Chimney (140′ × 7′ 6″) Octogonal		9,066		15,000	
Power House (72′ × 39′ × 21′)		6,236		10,000	
Sugar House (60′ × 55′ × 34′)		9,074		14,000	
Pan House (125′ × 55′ × 52′)		15,084		24,000	
Workshop (101′ × 26′ × 22′)		2,723		4,400	
Spray pond (92′ × 86′ × 3′)		2,496		4,200	
Office and Laboratory		18,500		26,000	
Latrines		3,000		4,500	
Drainage		7,500		10,000	
			1,32,009		1,42,100

Abstract Estimate for a Sugarcane Factory—contd.

—	1931 estimate for a factory with a capacity of 1,300,000 maunds of cane per season.		1937 estimate for a factory with a capacity of 500 tons of cane daily.	
	Rs.	Rs.	Rs.	Rs.
6. Sugar Godown (450′ × 50′ × 15′) .	44,194	46,059	60,000	62,400
Oil Godown (40′ × 15′ × 10′) . .	1,865		2,400	
7. Manager's Bungalow . . .	16,500	35,500	18,000	42,200
Assistants half semi-detached Bungalow	12,000		15,000	
Bungalow godowns (two) . .	1,500		2,200	
Bungalow outhouses. . . .	4,000		5,000	
Garages (two)	1,500		2,000	
8. Clerks quarters (12 double sets 12′ × 12′)	40,000	1,09,500	50,000	1,34,000
Workmens quarters (40 sets) (10′ × 10′)	36,000		45,000	
Watchmens' quarters (12 sets) (10′ × 10′)	11,000		14,000	
Laboratory equipment . . .	5,000		6,000	
Office and Bungalow furniture .	10,000		10,000	
Electric equipment, *i.e.*, wiring of factory and bungalows . .	7,500		9,000	
9. Tubewell		10,000		12,000
10. Weighbridge		15,000		20,000
11. Cart Scales		5,000		7,000
12. Locomotive		15,000		20,000
13. Storage trucks for cane . .		10,000		15,000
14. Molasses storage tanks . .		25,000		30,000
Total .		13,53,068		17,85,700

(13) *Letter No. 556, dated the 22nd October, 1937, from the Indian Sugar Mills' Association, Calcutta.*

With reference to the question of railway freights on sugar from factories in United Provinces and Bihar to internal markets in the Bombay and Madras Presidencies, I am enclosing herewith 6 copies of the Schedule showing rates of sugar to certain internal stations from factory stations on Bengal and North-Western Railway, which was referred to at the time of the oral evidence.

Enclosure.

Statement showing rates per maund for sugar.

Stations from	Stations to									Remarks.
	Madura Jn.			Tanjore Jn.			Trichinopoly Goods.			
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Babhnan	1	14	4	1	11	4	1	11	0	
Baitalpur	1	13	4	1	10	4	1	10	0	
Balrampur	1	14	10	1	11	10	1	11	6	
Barhni	1	14	1	1	11	1	1	10	9	(*a*)
Basti	1	13	10	1	10	10	1	10	6	*Viâ* Mokameh Ghat, Asansol, Waltair, Madras and Arkonam.
Bhatni	1	13	1	1	10	1	1	9	9	
Biswan	2	1	2	1	14	2	1	13	10	
Campierganj	1	13	10	1	10	10	1	10	6	
Captainganj	1	13	4	1	10	4	1	10	0	
Chakia	1	12	10	1	9	10	1	9	6	
Chanpatia	1	13	10	1	10	10	1	10	6	
Chhitanni	1	14	4	1	11	4	1	11	0	
Gauri Bazar	1	13	4	1	10	4	1	10	0	
Ghughli	1	13	4	1	10	4	1	10	0	
Harinagar	1	14	4	1	11	4	1	11	0	(*b*)
Harkhua	1	12	7	1	9	7	1	9	3	*Viâ* Mokameh Ghat, Asansol, Waltair and Jalarpet.
Hasanpur Road	1	12	3	1	9	3	1	8	11	
Hathua	1	12	7	1	9	7	1	9	3	
Jarwal Road	1	15	4	1	12	4	1	12	0	
Jhusi	1	15	1	1	12	1	1	11	9	
Kathkuiyan	1	12	10	1	9	10	1	9	6	
Khadda	1	13	10	1	10	10	1	10	6	
Lakshmiganj	1	13	1	1	10	1	1	9	9	
Lohat Siding	1	12	8	1	9	8	1	9	4	
Maharajganj	1	13	11	1	10	11	1	10	7	
Mairwa	1	12	10	1	9	10	1	9	6	
Majhowlia	1	12	10	1	9	10	1	9	6	
Marhowrah	1	12	4	1	9	4	1	9	0	
Motihari	1	12	10	1	9	10	1	9	6	
Motipur	1	12	9	1	9	9	1	9	5	
Munderwa	1	13	10	1	10	10	1	10	6	
Muzaffarpur	1	12	4	1	9	4	1	9	0	
Narkatiaganj	1	14	7	1	11	7	1	11	3	
Nawabganj (Gonda)	1	14	7	1	11	7	1	11	3	
Nirmali	1	13	3	1	10	3	1	9	11	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to Madura Jn.			Stations to Tanjore Jn.			Stations to Trichinopoly Goods.			Remarks.
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Pachrukhi . .	1	12	7	1	9	7	1	9	3	
Padrauna . .	1	12	10	1	9	10	1	9	6	
Pharenda . .	1	13	10	1	10	10	1	10	6	
Pipraich . . .	1	13	4	1	10	4	1	10	0	
Ramkola . .	1	13	1	1	10	1	1	9	9	
Riga . . .	1	13	5	1	10	5	1	10	1	
Sagauli . . .	1	12	10	1	9	10	1	9	6	
Sakri . . .	1	12	6	1	9	6	1	9	2	
Samastipur . .	1	11	3	1	8	3	1	7	11	
Sardarnagar . .	1	13	4	1	10	4	1	10	0	
Sasa Musa . .	1	12	7	1	9	7	1	9	3	
Savan . . .	1	12	7	1	9	7	1	9	3	
Semapur . . .	1	14	4	1	11	4	1	11	0	
Shahganj . .		...			...			...		
Sidhwalia . .	1	12	4	1	9	4	1	9	0	
Siswa Bazar . .	1	13	7	1	10	7	1	10	3	
Sitalpur . . .	1	12	0	1	9	4	1	9	0	
Tahsil Deoria . .	1	13	1	1	10	1	1	9	9	
Tamkuhi Road .	1	12	10	1	9	10	1	9	6	
Tarsarai . . .	1	12	4	1	9	4	1	9	0	
Walterganj . .	1	14	1	1	11	1	1	10	9	

Stations from	Stations to Vriddhachalam.			Stations to Coimbatore.			Stations to Salem Jn.			Remarks.
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Babhnan . .	1	8	4	1	12	9	1	9	4	
Baitalpur . .	1	7	4	1	11	9	1	8	4	
Balrampur . .	1	8	10	1	13	3	1	9	10	
Barhni . . .	1	8	1	1	12	6	1	9	1	(*a*) *Viâ* Mokameh Ghat, Asansol, Waltair, Madras and Arkonam.
Basti	1	7	10	1	12	3	1	8	10	
Bhatni . . .	1	7	1	1	11	6	1	8	1	
Biswan . . .	1	11	2	1	15	7	1	12	2	
Campierganj . .	1	7	10	1	12	3	1	8	10	
Captainganj . .	1	7	4	1	11	9	1	8	4	
Chakia . . .	1	6	10	1	11	3	1	7	10	
Chanpatia . .	1	7	10	1	12	3	1	8	10	
Chhitauni . .	1	8	4	1	12	9	1	9	4	
Gauri Bazar . .	1	7	4	1	11	9	1	8	4	
Ghughli . . .	1	7	4	1	11	9	1	8	4	
Harinagar . .	1	8	4	1	12	9	1	9	4	(*b*) *Viâ* Mokameh Ghat, Asansol, Waltair, Madras and Jalarpet.
Harkhua . . .	1	6	7	1	11	0	1	7	7	
Hasanpur Road .	1	6	3	1	10	8	1	7	3	
Hathua . . .	1	6	7	1	11	0	1	7	7	
Jarwal Road . .	1	9	4	1	13	9	1	10	4	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to Vriddhachalam.			Coimbatore.			Salem Jn.			Remarks.
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Jhusi	1	9	1	1	13	6	1	10	1	
Kathkuiyan	1	6	10	1	11	3	1	7	10	
Khadda	1	7	10	1	12	3	1	8	10	
Lakshmiganj	1	7	1	1	11	6	1	8	1	
Lohat Siding	1	6	8	1	11	1	1	7	8	
Maharajganj	1	7	11	1	12	4	1	8	11	
Mairwa	1	6	10	1	11	3	1	7	10	
Majhowlia	1	6	10	1	11	3	1	7	10	
Marhowrah	1	6	4	1	10	9	1	7	4	
Motihari	1	6	10	1	11	3	1	7	10	
Motipur	1	6	9	1	11	2	1	7	9	
Munderwa	1	7	10	1	12	3	1	8	10	
Muzaffarpur	1	6	4	1	10	9	1	7	4	
Narkatiaganj	1	8	1	1	12	6	1	9	1	
Nawabganj (Gonda)	1	8	7	1	13	0	1	9	7	
Nirmali	1	7	3	1	11	8	1	8	3	
Pachrukhi	1	6	7	1	11	0	1	7	7	
Padrauna	1	6	10	1	11	3	1	7	10	
Pharenda	1	7	10	1	12	3	1	8	10	
Pipraich	1	7	4	1	11	9	1	8	4	
Ramkola	1	7	1	1	11	6	1	8	1	
Riga	1	7	5	1	11	10	1	8	5	
Sagauli	1	6	10	1	11	3	1	7	10	
Sakri	1	6	6	1	10	11	1	7	6	
Samastipur	1	5	3	1	9	8	1	6	3	
Sardarnagar	1	7	4	1	11	9	1	8	4	
Sasa Musa	1	6	7	1	11	0	1	7	7	
Savan	1	6	7	1	11	0	1	7	7	
Semapur	1	8	4	1	12	9	1	9	4	
Shahganj		...			...			...		
Sidhwalia	1	6	4	1	11	0	1	7	4	
Siswa Bazar	1	7	7	1	12	0	1	8	7	
Sitalpur	1	6	4	1	10	9	1	7	4	
Tahsil Deoria	1	7	1	1	11	6	1	8	1	
Tamkuhi Road	1	6	10	1	11	3	1	7	10	
Tarsarai	1	6	4	1	10	9	1	7	4	
Walterganj	1	8	1	1	12	6	1	9	1	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to Adoni.	Bellary.	Bangalore City.	Remarks.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Babhnan	1 12 11	1 12 11	1 9 11	
Baitalpur	1 11 11	1 11 11	1 8 11	
Balrampur	1 13 5	1 13 5	1 10 5	
Barhni	1 12 8	1 12 8	1 9 8	
Basti	1 12 5	1 12 5	1 9 5	*Viâ* Mokameh Ghat, Asansol, Waltair and Madras.
Bhatni	1 11 8	1 11 8	1 8 8	
Biswan	1 15 9	1 15 9	1 12 9	
Campierganj	1 12 5	1 12 5	1 9 5	
Captainganj	1 11 11	1 11 11	1 8 11	
Chakia	1 11 5	1 11 5	1 8 6	
Chanpatia	1 12 5	1 12 5	1 9 5	
Chhitauni	1 12 11	1 12 11	1 9 11	
Gauri Bazar	1 11 11	1 11 11	1 8 11	
Ghughli	1 11 11	1 11 11	1 8 11	
Harinagar	1 12 11	1 12 11	1 9 11	
Harkhua	1 11 2	1 11 2	1 9 2	
Hasanpur Road	1 10 10	1 10 10	1 7 10	
Hathua	1 11 2	1 11 2	1 8 2	
Jarwal Road	1 13 11	1 13 11	1 10 11	
Jhusi	1 13 8	1 13 8	1 10 8	
Kathkuiyan	1 11 5	1 11 5	1 8 5	
Khadda	1 12 5	1 12 5	1 9 5	
Lakshmiganj	1 11 8	1 11 8	1 8 8	
Lohat Siding	1 11 3	1 11 3	1 8 3	
Maharajganj	1 12 6	1 12 6	1 9 6	
Mairwa	1 11 5	1 11 5	1 8 5	
Majhowlia	1 11 5	1 11 5	1 8 5	
Marhowrah	1 10 11	1 10 11	1 7 11	
Motihari	1 11 5	1 11 5	1 8 5	
Motipur	1 11 4	1 11 4	1 8 4	
Munderwa	1 12 5	1 12 5	1 9 5	
Muzaffarpur	1 10 11	1 10 11	1 7 11	
Narkatiaganj	1 12 8	1 12 8	1 9 8	
Nawabganj (Gonda)	1 13 2	1 13 2	1 10 2	
Nirmali	1 11 10	1 11 10	1 8 10	
Pachrukhi	1 11 2	1 11 2	1 8 2	
Padrauna	1 11 5	1 11 5	1 8 5	
Pharenda	1 12 5	1 12 5	1 9 5	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to			Remarks.
	Adoni.	Bellary.	Bangalore City.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Pipraich . . .	1 11 11	1 11 11	1 8 11	
Ramkola . .	1 11 8	1 11 8	1 8 8	
Riga . . .	1 12 0	1 12 0	1 9 0	
Sagauli . . .	1 11 5	1 11 5	1 8 5	
Sakri . . .	1 11 1	1 11 1	1 8 1	
Samastipur . .	1 9 10	1 9 10	1 6 10	
Sardarnagar . .	1 11 11	1 11 11	1 8 11	
Sasa Musa . .	1 11 2	1 11 2	1 8 2	
Savan . . .	1 11 2	1 11 2	1 8 2	
Semapur . .	1 12 11	1 12 11	1 9 11	
Shahganj . .	...	...	...	
Sidhwalia . .	1 10 11	1 10 11	1 7 11	
Siswa Bazar . .	1 12 2	1 12 2	1 9 2	
Sitalpur . . .	1 10 11	1 10 11	1 7 11	
Tahsil Deoria . .	1 11 8	1 11 8	1 8 8	
Tamkuhi Road .	1 11 5	1 11 5	1 8 5	
Tarsarai . . .	1 10 11	1 10 11	1 7 11	
Walterganj . .	1 12 8	1 12 8	1 9 8	

Stations from	Stations to			Remarks.
	Dharwar.	Hospet.	Hubli.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Babhnan . . .	2 1 10	1 14 4	2 1 5	
Baitalpur . .	2 0 10	1 13 4	2 0 5	
Balrampur . .	2 2 4	1 14 10	2 1 11	
Barhni . . .	2 1 7	1 14 1	2 1 2	
Basti . . .	2 1 4	1 13 10	2 0 11	*Viâ* Mokameh Ghat, Asansol, Waltair and Madras.
Bhatni . . .	2 0 7	1 13 1	2 0 2	
Biswan . . .	2 4 8	2 1 2	2 4 3	
Campierganj . .	2 1 4	1 13 10	2 0 11	
Captainganj . .	2 0 10	1 13 4	2 0 5	
Chakia . . .	2 0 4	1 12 10	1 15 11	
Chanpatia . .	2 1 4	1 13 10	2 0 11	
Chhitauni . .	2 1 10	1 14 4	2 1 5	
Gauri Bazar . .	2 0 10	1 13 4	2 0 5	
Ghughli . . .	2 0 10	1 13 4	2 0 5	
Harinagar . .	2 1 10	1 14 4	2 1 5	
Harkhua . .	2 0 1	1 12 7	1 15 8	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to Dharwar.			Hospet.			Hubli.			Remarks.
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Hasanpur Road	1	15	9	1	12	3	1	15	4	
Hathua	2	0	1	1	12	7	1	15	8	
Jarwal Road	2	2	10	1	15	4	2	2	5	
Jhusi	2	2	7	1	15	1	2	2	2	
Kathkuiyan	2	0	4	1	12	10	1	15	11	
Khadda	2	1	4	1	13	10	2	0	11	
Lakshmiganj	2	0	7	1	13	1	2	0	2	
Lohat Siding	2	0	2	1	12	8	1	15	9	
Maharajganj	2	1	5	1	13	11	2	1	0	
Mairwa	2	0	4	1	12	10	1	15	11	
Majhowlia	2	0	4	1	12	10	1	15	11	
Marhowrah	1	15	10	1	12	4	1	15	5	
Motihari	2	0	4	1	12	10	1	15	11	
Motipur	2	0	3	1	12	9	1	15	10	
Munderwa	2	1	4	1	13	10	2	0	11	
Muzaffarpur	1	15	10	1	12	4	1	15	5	
Narkatiaganj	2	1	7	1	14	1	2	1	2	
Nawabganj (Gonda)	2	1	1	1	14	7	2	1	8	
Nirmali	2	0	9	1	13	3	2	0	4	
Pachrukhi	2	0	1	1	12	7	1	15	8	
Padrauna	2	0	4	1	12	10	1	15	11	
Pharenda	2	1	4	1	13	10	2	0	11	
Pipraich	2	0	10	1	13	4	2	0	5	
Ramkola	2	0	7	1	13	1	2	0	2	
Riga	2	0	11	1	13	5	2	0	6	
Sagauli	2	0	4	1	12	10	1	15	11	
Sakri	2	0	0	1	12	6	1	15	7	
Samastipur	1	14	9	1	11	3	1	14	4	
Sardarnagar	2	0	10	1	13	4	2	0	5	
Sasa Musa	2	0	1	1	12	7	1	15	8	
Savan	2	0	1	1	12	7	1	15	8	
Semapur	2	1	10	1	14	4	2	1	5	
Shahganj		...			...			...		
Sidhwalia	1	15	10	1	12	4	1	15	5	
Siswa Bazar	2	1	1	1	13	7	2	0	8	
Sitalpur	1	15	10	1	12	4	1	15	7	
Tahsil Deoria	2	0	7	1	13	1	2	0	2	
Tamkuhi Road	2	0	4	1	12	10	1	15	11	
Tarsarai	1	15	10	1	12	4	1	15	5	
Walterganj	2	1	7	1	14	1	2	1	2	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to									Remarks.
	Secunderabad *viâ* Allahabad City, Naini and Balharshah.			Poona *viâ* Allahabad City and Naini.			Dhong *viâ* Allahabad City and Naini.			
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Babhnan . . .	1	15	2	1	9	2	2	3	6	
Baitalpur . .	1	14	2	1	10	9	2	5	1	
Balrampur . .	1	15	8	1	8	9	2	3	1	
Barhni . . .	1	14	11	1	10	1	2	4	5	
Basti . . .		...		1	9	9	2	4	1	
Bhatni . . .	1	13	11	1	10	2	2	4	6	
Biswan . . .	2	2	0	1	8	0	2	2	4	
Campierganj . .	1	14	8	1	11	8	2	6	0	
Captainganj . .	1	14	2	1	11	10	2	6	2	
Chakia . . .	1	13	8	1	12	9	2	7	1	
Chanpatia . .	1	14	8	1	14	2	2	8	6	
Chhitauni . .	1	15	2	1	12	8	2	7	0	
Gauri Bazar . .	1	14	2	1	10	11	2	5	3	
Ghughli . . .	1	14	2	1	12	1	2	6	5	
Harinagar . .	1	15	2	1	14	2	2	8	6	
Harkhua . .	1	13	5	1	11	10	2	6	2	
Hasanpur Road .	1	13	1	1	13	10	2	8	2	
Hathua . . .	1	13	5	1	11	6	2	5	10	
Jarwal Road . .	2	0	2	1	7	1	2	1	5	
Jhusi . . .		...		1	4	10	1	15	2	
Kathkuiyan . .	1	13	8	1	12	6	2	6	10	
Khadda . . .	1	14	8	1	12	6	2	6	10	
Lakshmiganj . .	1	13	11	1	12	0	2	6	4	
Lohat Siding . .	1	13	6	1	14	5	2	8	9	
Maharajganj . .	1	15	9	1	11	7	2	5	11	
Mairwa . . .	1	13	8	1	10	9	2	5	1	
Majhowlia . .	1	13	8	1	14	2	2	8	6	
Marhowrah . .	1	13	2	1	11	7	2	5	11	
Motihari . .	1	13	8	1	13	5	2	7	9	
Motipur . . .	1	13	7	1	13	6	2	7	10	
Munderwa . .	1	14	8	1	10	1	2	4	5	
Muzaffarpur . .		...		1	11	8	2	6	0	
Narkatiaganj . .	1	14	11		...		2	6	2	
Nawabganj (Gonda) .	1	15	5	1	8	6	2	12	10	
Nirmali . . .		...		1	15	6	2	9	10	

Statement showing rates per maund for sugar—contd.

Stations from	Secunderabad *viâ* Allahabad City, Naini and Balharshah.	Poona *viâ* Allahabad City and Naini.	Dhong *viâ* Allahabad City and Naini.	Remarks.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Pachrukhi . .	1 13 5	1 11 4	2 5 8	
Padrauna . .	1 13 8	1 12 4	2 7 1	
Pharenda . .	1 14 8	1 11 7	2 6 4	
Pipraich . . .	1 14 2	1 11 5	2 5 9	
Ramkola . .	1 13 11	1 12 2	2 6 5	
Riga . . .	1 14 3	1 15 6	2 10 3	
Sagauli . . .	1 13 8	1 14 8	2 9 0	
Sakri . . .	1 13 4	1 14 9	2 9 1	
Samastipur . .	1 12 1	1 12 10	2 7 2	
Sardarnagar . .	1 14 2	1 11 2	2 5 6	
Sasa Musa . .	1 13 5	1 11 11	2 6 8	
Savan . . .	1 13 5	1 11 2	2 5 6	
Semapur . .	...	...	...	
Shahganj . .	...	...	...	
Sidhwalia . .	1 13 2	1 12 4	2 6 8	
Siswa Bazar . .	1 14 5	1 12 3	2 6 7	
Sitalpur . .	1 13 2	1 11 9	2 6 1	
Tahsil Deoria . .	1 13 11	1 10 7	2 4 11	
Tamkuhi Road .	1 13 8	1 12 5	2 6 9	
Tarsarai . . .	1 13 2	1 13 11	2 8 3	
Walterganj . .	1 14 11	1 9 8	2 4 0	

Stations from	Amalner *viâ* Allahabad City and Naini.	Bhusâval *viâ* Allahabad City and Naini.	Remarks.
	Rs. A. P.	Rs. A. P.	
Babhnan . . .	1 12 1	1 10 4	
Baitalpur . . .	1 13 9	1 12 0	
Balrampur . . .	1 15 8	1 9 11	
Barhni . . .	1 13 0	1 11 3	
Basti	1 12 8	1 10 11	
Bhatni . . .	1 13 2	1 11 5	
Biswan . . .	1 10 11	1 9 2	
Campierganj . .	1 14 7	1 12 10	
Captainganj . .	1 14 9	1 13 0	
Chakia . . .	1 15 9	1 14 0	
Chanpatia . . .	2 1 2	1 15 5	
Chhitauni . . .	1 15 7	1 13 10	
Gauri Bazar . .	1 13 11	1 12 2	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to Amalner *viâ* Allahabad City and Naini.			Stations to Bhusaval *viâ* Allahabad City and Naini.			Remarks.
	Rs.	A.	P.	Rs.	A.	P.	
Ghughli . . .	1	15	0	1	13	3	
Harinagar . . .	2	1	2	1	6	5	
Harkhua . . .	1	14	10	1	13	1	
Hasanpur Road . .	2	0	10	1	15	1	
Hathua . . .	1	14	6	1	12	9	
Jarwal Road . .	1	10	0	1	8	3	
Jhusi	1	7	10	1	6	1	
Kathkuiyan . .	1	15	5	1	13	8	
Khadda . . .	1	15	5	1	13	8	
Lakshmiganj . .	1	14	11	1	13	2	
Lohat Siding . .	2	1	5	1	15	8	
Maharajganj . .	1	14	7	1	12	10	
Mairwa . . .	1	13	9	1	12	0	
Majhowlia . . .	2	1	2	1	15	5	
Merhowrah . . .	1	14	7	1	12	10	
Motihari . . .	2	0	5	1	14	8	
Motipur . . .	2	0	6	1	14	9	
Munderwa . . .	1	13	0	1	11	3	
Muzaffarpur . .	1	14	8	1	12	11	
Narkatiaganj . .	1	14	10	1	13	1	
Nawabganj (Gonda) .	1	11	5	1	9	8	
Nirmali . . .	2	2	6	2	0	9	
Pachrukhi . . .	1	14	4	1	12	7	
Padrauna . . .	1	15	9	1	14	0	
Pharenda . . .	1	15	0	1	13	8	
Pipraich . . .	1	14	4	1	12	7	
Ramkola . . .	1	15	0	1	13	3	
Riga	2	2	11	2	1	2	
Sagauli . . .	2	1	8	1	15	11	
Sakri	2	1	9	2	0	0	
Samastipur . . .	1	15	10	1	14	1	
Sardarnagar . .	1	14	2	1	12	5	
Sasa Musa . . .	1	14	11	1	13	2	
Savan . . .	1	14	2	1	12	5	
Semapur . . .		...			...		
Shahganj . . .		...			...		
Sidhwalia . . .	1	15	4	1	13	7	
Siswa Bazar . .	1	15	2	1	13	7	
Sitalpur . . .	1	14	9	1	13	0	
Tahsil Deoria . .	1	13	7	1	11	10	
Tamkuhi Road . .	1	15	5	1	13	8	
Tarsarai . . .	2	0	11	1	15	2	
Walterganj . .	1	12	7	1	11	10	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to									Remarks.
	Belgaum *viâ* Mokameh Ghat, Asansol, Waltair and Madras.			Gadag Jn. *viâ* Mokameh Ghat, Asansol, Waltair and Madras.			Mysore *viâ* Mokameh Ghat, Asansol, Waltair, Madras and Bangalore City.			
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Babhnan . . .	2	4	6	2	0	2	1	12	9	
Baitalpur . .	2	3	6	1	15	2	1	12	9	
Balrampur . .	2	5	0	2	0	8	1	13	3	
Barhni . . .	2	4	3	1	15	11	1	12	6	
Basti. . . .	2	4	0	1	15	8	1	12	3	
Bhatni . . .	2	3	3	1	14	11	1	11	6	
Biswan . . .	2	7	4	2	3	0	1	15	7	
Campierganj . .	2	4	0	1	15	8	1	12	3	
Captainganj . .	2	3	6	1	15	2	1	11	9	
Chakia . . .	2	3	0	1	14	8	1	11	3	
Chanpatia . .	2	4	0	1	15	8	1	12	3	
Chhitauni . .	2	4	6	2	0	2	1	12	9	
Gauri Bazar . .	2	3	6	1	15	2	1	11	9	
Ghughli . . .	2	3	6	1	15	2	1	11	9	
Harinagar . .	2	4	6	2	0	2	1	12	9	
Harkhua . .	2	2	9	1	14	5	1	11	0	
Hasanpur Road .	2	2	5	1	14	1	1	10	8	
Hathua . . .	2	9	0	1	14	5	1	11	0	
Jarwal Road . .	2	5	6	2	1	2	1	13	9	
Jhusi . . .	2	5	3	2	0	11	1	13	6	
Kathkuiyan . .	2	3	0	1	14	8	1	11	3	
Khadda . . .	2	4	0	1	15	8	1	12	3	
Lakshmiganj . .	2	3	3	1	14	11	1	11	6	
Lohat Siding . .	2	2	10	1	14	6	1	11	1	
Maharajganj . .	2	4	1	1	15	9	1	12	4	
Mairwa . . .	2	3	0	1	14	8	1	11	3	
Marhowlia . .	2	3	0	1	14	8	1	11	3	
Marhowrah . .	2	2	6	1	14	2	1	10	9	
Motihari . .	2	3	0	1	14	8	1	11	3	
Motipur . . .	2	2	11	1	14	7	1	11	2	
Munderwa . .	2	4	0	1	15	8	1	12	3	
Muzaffarpur . .	2	2	6	1	14	2	1	10	9	
Narkatiaganj . .	2	4	3	1	15	11	1	12	6	
Nawabganj (Gonda) .	2	4	9	2	0	5	1	13	0	
Nirmali . . .	2	3	5	1	15	1	1	11	8	
Pachrukhi . .	2	2	9	1	14	5	1	11	0	
Padrauna . .	2	3	0	1	14	8	1	11	3	
Pharenda . .	2	4	0	1	15	8	1	12	3	
Pipraich . . .	2	3	6	1	15	2	1	11	9	
Ramkola . .	2	3	3	1	14	11	1	11	6	
Riga . . .	2	3	7	1	15	3	1	11	10	
Sagauli . . .	2	3	0	1	14	8	1	11	3	

Statement showing rates per maund for sugar—**contd.**

Stations from	Stations to									Remarks.
	Belgaum *viâ* Mokameh Ghat, Asansol, Waltair and Madras.			Gadag Jn. *viâ* Mokameh Ghat, Asansol, Waltair and Madras.			Mysore *viâ* Mokameh Ghat, Asansol, Waltair, Madras and Bangalore City.			
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Sakri	2	2	8	1	14	4	1	10	11	
Samastipur	2	1	5	1	13	1	1	9	8	
Sardarnagar	2	3	6	1	15	2	1	11	9	
Sasa Musa	2	2	9	1	14	5	1	11	0	
Savan	2	2	9	1	14	5	1	11	0	
Semapur	2	4	6	2	0	2	1	12	9	
Shahganj		...			...			...		
Sidhwalia	2	2	6	1	14	2	1	10	9	
Siswa Bazar	2	3	9	1	15	5	1	12	0	
Sitalpur	2	2	6	1	14	2	1	10	9	
Tahsil Deoria	2	3	9	1	14	11	1	11	6	
Tamkuhi Road	2	3	0	1	14	8	1	11	3	
Tarsarai	2	2	6	1	14	2	1	10	9	
Walterganj	2	4	3	1	15	11	1	12	6	

Stations from	Stations to						Remarks.
	Kurnool town *viâ* Mokameh Ghat, Asansol, Waltair, Madras and Dronachalam.			Hyderabad *viâ* Allahabad City Naini and Balharshah.			
	Rs.	A.	P.	Rs.	A.	P.	
Babhnan	1	14	6	1	15	4	
Baitalpur	1	13	6	1	14	4	
Balrampur	1	15	0	1	15	10	
Barhni	1	14	3	1	15	1	
Basti	1	14	0		...		
Bhatni	1	13	3	1	14	1	
Biswan	2	1	4	2	2	2	
Campierganj	1	14	0	1	14	10	
Captainganj	1	13	6	1	14	4	
Chakia	1	13	0	1	13	10	
Chanpatia	1	14	0	1	14	10	
Chhitauni	1	14	6	1	15	4	
Gauri Bazar	1	13	6	1	14	4	
Ghughli	1	13	6	1	14	4	
Harinagar	1	14	6	1	15	4	
Harkhua	1	12	9	1	13	10	
Hasanpur Road	1	12	5	1	13	3	
Hathua	1	12	9	1	13	7	
Jarwal Road	1	15	6	2	0	4	
Jhusi	1	15	3		...		

Statement showing rates per maund for sugar—contd.

Stations from	Stations to						Remarks.
	Kurnool town *viâ* Mokameh Ghat, Asansol, Waltair, Madras and Dronachalam.			Hyderabad *viâ* Allahabad City Naini and Balharshah.			
	Rs.	A.	P.	Rs.	A.	P.	
Kathkuiyan	1	13	0	1	13	10	
Khadda	1	14	0	1	14	10	
Lakshmiganj	1	13	3	1	14	1	
Lohat Siding	1	12	10	1	13	8	
Maharajganj	1	14	1	1	15	11	
Mairwa	1	13	0	1	13	10	
Majhowlia	1	13	0	1	13	10	
Marhowrah	1	12	6	1	13	4	
Motihari	1	13	0	1	13	10	
Motipur	1	12	11	1	13	9	
Munderwa	1	14	0	1	14	10	
Muzaffarpur	1	12	6		...		
Narkatiaganj	1	14	3	1	15	1	
Nawabganj (Gonda)	1	14	9	1	15	7	
Nirmali	1	13	5		...		
Pachrukhi	1	12	9	1	13	7	
Padrauna	1	13	0	1	13	10	
Pharenda	1	14	0	1	14	10	
Pipraich	1	13	6	1	14	4	
Ramkola	1	13	3	1	14	1	
Riga	1	13	7	1	14	5	
Sagauli	1	13	0	1	13	10	
Sakri	1	12	8	1	13	6	
Samastipur	1	11	5	1	12	3	
Sardarnagar	1	13	6	1	14	4	
Sasa Musa	1	12	9	1	13	7	
Savan	1	12	9	1	13	7	
Semapur	1	14	6		...		
Shahganj		...			...		
Sidhwalia	1	12	6	1	13	4	
Siswa Bazar	1	13	9	1	14	7	
Sitalpur	1	12	6	1	13	4	
Tahsil Deoria	1	13	3	1	14	1	
Tamkuhi Road	1	13	0	1	13	10	
Tarsarai	1	12	6	1	13	4	
Walterganj	1	14	3	1	15	1	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to Bezwada *viâ* Mokameh Ghat, Asansol and Waltair.			Stations to Ellore *viâ* Mokameh Ghat, Asansol and Waltair.			Remarks.
	Rs.	A.	P.	Rs.	A.	P.	
Babhnan	2	13	7	2	12	4	
Baitalpur	2	10	7	2	9	4	
Balrampur	2	15	5	2	14	2	
Barhni	2	13	11	1	12	8	
Basti	2	12	11	2	11	8	
Bhatni	2	10	0	2	8	9	
Biswan	3	1	2	2	15	11	
Campierganj	2	12	3	2	11	0	
Captainganj	2	11	8	2	10	5	
Chakia	2	8	0	2	6	9	
Chanpatia	2	10	0	2	8	9	
Chhitauni	2	12	9	2	11	6	
Gauri Bazar	2	10	9	2	9	6	
Ghughli	2	12	0	2	10	9	
Harinagar	2	10	9	2	9	6	
Harkhua	2	9	8	2	8	5	
Hasanpur Road	2	9	7	2	8	4	
Hathua	2	9	4	2	8	1	
Jarwal Road	2	11	4	2	10	1	
Jhusi	2	10	0	2	8	9	
Kathkuiyan	2	10	10	2	9	7	
Khadda	2	12	6	2	11	3	
Lakshmiganj	2	11	5	2	10	2	
Lohat Siding	2	7	4	2	6	1	
Maharajganj	2	8	8	2	7	5	
Mairwa	2	9	5	2	8	2	
Majhowlia	2	9	5	2	8	2	
Marhowrah	2	8	2	2	6	11	
Motihari	2	8	8	2	7	5	
Motipur	2	7	6	2	6	3	
Munderwa	2	12	7	2	11	4	
Muzaffarpur	2	6	11	2	5	8	
Narkatiaganj	2	10	5	2	9	2	
Nawabganj (Gonda)	2	14	8	2	13	5	
Nirmali	2	8	2	2	6	11	
Pachrukhi	2	8	9	2	7	6	
Padrauna	2	11	0	2	9	9	
Pharenda	2	12	5	2	11	2	
Pipraich	2	11	11	1	10	3	
Ramkola	2	11	4	2	10	1	
Riga	2	8	4	2	7	1	
Sagauli	2	9	2	2	7	11	
Sakri	2	7	1	2	5	10	
Samastipur	2	6	10	2	4	7	

Statement showing rates per maund for sugar—contd.

Stations from	Stations to		Remarks.
	Bezwada *viâ* Mokameh Ghat, Asansol and Waltair.	Ellore *viâ* Mokameh Ghat, Asansol and Waltair.	
	Rs. A. P.	Rs. A. P.	
Sardarnagar	2 11 1	2 9 10	
Sasa Musa	2 9 9	2 8 6	
Savan	2 8 11	2 7 8	
Semapur	2 8 5	2 7 2	
Shahganj	...	...	
Sidhwalia	2 9 2	2 7 11	
Siswa Bazar	2 12 3	2 11 0	
Sitalpur	2 6 10	2 5 7	
Tahsil Deoria	2 10 5	2 9 2	
Tamkuhi Road	2 10 4	2 9 1	
Tarsarai	2 6 11	2 5 8	
Walterganj	2 13 0	2 11 9	

Stations from	Stations to		Remarks.
	Guntur *viâ* Mokameh Ghat, Asansol and Waltair.	Rajahmundry *viâ* Mokameh Ghat, Asansol and Waltair.	
	Rs. A. P.	Rs. A. P.	
Babhnan	2 14 4	2 10 5	
Baitalpur	2 11 4	2 7 5	
Balrampur	3 0 2	2 12 3	
Barhni	2 14 8	2 10 9	
Basti	2 13 8	2 9 9	
Bhatni	2 10 9	2 6 10	
Biswan	3 1 11	2 14 0	
Campierganj	2 13 0	2 9 1	
Captainganj	2 12 5	2 8 6	
Chakia	2 8 9	2 4 10	
Chanpatia	2 10 9	2 6 10	
Chhitauni	2 13 6	2 9 7	
Gauri Bazar	2 11 6	2 7 7	
Ghughli	2 12 9	2 8 10	
Harinagar	2 11 6	2 7 7	
Harkhua	2 10 5	2 6 6	
Hasanpur Road	2 10 4	2 6 5	
Hathua	2 10 1	2 6 2	
Jarwal Road	2 12 1	2 9 6	
Jhusi	2 10 9	2 8 3	
Kathkuiyan	2 11 7	2 7 8	
Khadda	2 13 3	2 9 4	
Lakshmiganj	2 12 2	2 8 3	
Lohat Siding	2 8 1	2 4 2	
Maharajganj	2 9 5	2 5 6	
Mairwa	2 10 2	2 6 3	

Statement showing rates per maund for sugar—concld.

Stations from	Stations to						Remarks.
	Guntur *viâ* Mokameh Ghat, Asansol and Waltair.			Rajahmundry *viâ* Mokameh Ghat, Asansol and Waltair.			
	Rs.	A.	P.	Rs.	A.	P.	
Majhowlia	2	10	2	2	6	3	
Marhowrah	2	8	11	2	5	0	
Motihari	2	9	10	2	5	6	
Motipur	2	8	3	2	4	4	
Munderwa	2	13	4	2	9	5	
Muzaffarpur	2	7	8	2	3	9	
Narkatiaganj	2	11	2	2	7	3	
Nawabganj (Gonda)	2	15	5	2	11	6	
Nirmali	2	8	11	2	5	0	
Pachrukhi	2	9	6	2	5	7	
Padrauna	2	11	9	2	7	10	
Pharenda	2	13	2	2	9	3	
Pipraich	2	12	8	2	8	9	
Ramkola	2	12	1	2	8	2	
Riga	2	9	1	2	5	2	
Sagauli	2	9	11	2	6	0	
Sakri	2	7	10	2	3	11	
Samastipur	2	10	7	2	2	8	
Sardarnagar	2	11	10	2	7	11	
Sasa Musa	2	10	6	2	6	7	
Savan	2	9	8	2	5	9	
Semapur	2	9	2	2	5	3	
Shahganj		...			...		
Sidhwalia	2	9	11	2	6	0	
Siswa Bazar	2	13	0	2	9	1	
Sitalpur	2	7	7	2	3	8	
Tahsil Deoria	2	11	2	2	7	3	
Tamkuhi Road	2	11	7	2	7	2	
Tarsarai	2	7	8	2	3	9	
Walterganj	2	13	9	2	9	10	

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(14) *Letter No. 922, dated the 6th November, 1937, from the Secretary, Tariff Board, to Indian Sugar Mills' Association, Calcutta.*

During the course of the examination of the representatives of your Association a note was promised on the statistical data which should be collected from all the Sugar factories for publication. I am to request that the information may kindly be sent early.

(15) *Letter No. T. B. E./605, dated the 9th November, 1937, from the Indian Sugar Mills Association, Calcutta.*

I am in receipt of your letter No. 922 of the 6th instant in connection with the note on the statistical data which, in the opinion of the Association, should be collected from all the sugar factories for publication.

The present position is that under the Sugar Production Rules,* 1936, a copy of which I am enclosing herewith, the factories are required to submit several periodical returns to the Director of the Imperial Institute of Sugar Technology. As you will see from the forms appended to these rules all kinds of information are required under these rules all of which are not very necessary for trade purposes. Some time back there was a reference from the Imperial Council of Agricultural Research about the proposal to make the returns under the Sugar Production Rules obligatory upon the factories and to provide a penalty up to Rs. 500 for failure to submit these returns. I am enclosing herewith a copy of the letter of the Imperial Council of Agricultural Research and the Association's reply thereto, from which you will find that the Committee have suggested that only the returns as per forms B (i), B (ii) and G (i) and G (ii) may be made obligatory. These forms will supply the necessary information about the production, deliveries, and stocks which is the most important information for trade purposes. This point was clearly amplified by Mr. D. P. Khaitan during the course of the evidence submitted on behalf of the Association before the Tariff Board last month (please see page 16 of the manuscript). As Mr. Khaitan had pointed out "the chief statistics which are required are the quantity of sugarcane crushed, quantity of sugar produced, quantity of sugar delivered and the quantity of sugar in stock". As regards other technical data and figures it may be left to the option of the factories to supply the same for the purposes of pooling the information and exchanging it with the co-operative factories as is now being done in some cases through this Association and through the office of the Imperial Institute of Sugar Technology.

Enclosure No. 1.

Copy of letter received from Offg. Secretary, the Imperial Council of Agricultural Research, Simla, No. F. 26-II/37-A, dated the 18th June, 1937.

Subject:—SUGAR PRODUCTION RULES, 1935. IRREGULAR SUBMISSION OF RETURNS.

I am directed to forward herewith a copy of the note submitted by the Director, Imperial Institute of Sugar Technology, to the Sugar Committee reviewing the operation of the Sugar Production Rules, 1935, during the 1936-37 cane crushing season. As you are aware the Director issued a certain number of statements and forecasts for the benefit of sugar industry on the basis of the returns submitted under the Sugar Production Rules. These Statements lose much in value and importance if they are not based on the information supplied by all the factories or are issued late. This fact has apparently not been realised by the individual sugar factories, and as is clear from the Director's note, adequate co-operation has not been forthcoming from them in spite of repeated reminders and appeals. The Sugar Committee of the Imperial Council of Agricultural Research, therefore, came to the conclusion that the only way of improving the Sugar production returns was to amend the Sugar Industry (Protection) Act, 1932, and provide a penalty up to Rs. 500 for failure to submit returns. Before proceeding further with the question, however, the Committee will be glad to have the views of your Association on this point and as to which of the returns should be made obligatory.

It is requested that the views of your Association may kindly be intimated to this Department at an early date.

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* Not printed.

Enclosure No. 2.

Copy of letter to the Secretary, Imperial Council of Agricultural Research, Simla, No. I. S. A./1/2091, dated the 15th July, 1937.

Re SUGAR PRODUCTION RULES, 1935. IRREGULAR SUBMISSION OF RETURNS BY FACTORIES.

I am directed to acknowledge with thanks the receipt of your letter No. F. 26-II/37-A, dated the 18th June, 1937, on the above subject together with the enclosure. The Committee have gone carefully into the report submitted by the Director, Imperial Institute of Sugar Technology reviewing the operation of the Sugar Production Rules, 1935, during the last cane crushing season and regret to note that there has been no improvement in the co-operation from Central Sugar Factories with regard to the submission of the periodical returns under the Sugar Production Rules to the Director of the Imperial Institute of Sugar Technology. The Committee realise that the prompt publication of the consolidated statements of these returns particularly those relating to the production and stock [Form G (i) and G (ii)] is in the interests of the Industry itself and they agree that these statements lose much in value and importance if they are not based on the information supplied by all the factories or issued late. The Committee are therefore agreeable to the proposal of the Sugar Committee to amend the Sugar Industry (Protection) Act, 1932, by providing a penalty for failure to submit the returns but they feel that the proposed penalty of Rs. 500 will be very high and suggest that the amount of penalty should in no case exceed Rs. 200. The Committee are of opinion that returns as per forms B (i) and B (ii) and G (i) and G (ii) may be made obligatory under the proposed amendment.

In this connection, the Committee would also like to point out that, as appears from the notes submitted by the Director of the Imperial Institute of Sugar Technology on the subject, part of the delay in the publication of the consolidated statements is also due to the existing arrangement of printing and of sending the consolidated statements for the approval of the Imperial Council before printing. It appears from the note that arrangement has already been made for sending the consolidated statements for publication direct to the press instead of sending them first to the Imperial Council for approval and the Committee hope that this arrangement will reduce delay in publication. As regards the suggestion made by the Director of the Imperial Institute of Sugar Technology that the delay can be further reduced if the consolidated statements are cyclostyled in his office instead of being sent for printing, while the Committee appreciate that this arrangement will reduce the delay in the publication of the statements, they would only like to point out that the impressions in the cyclostyled copies are sometimes faint and blurred. The Committee, however, trust that every possible effort will be made to expedite the publication of the statements.

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(16) *Letter No. T. B. E./2/621, dated the 30th November, 1937, from the Indian Sugar Mills Association, Calcutta.*

With reference to the points raised at the time of the supplementary evidence on behalf of the Association I write to say that the estimated carry over of sugar with factories on the 1st of December, 1936, was estimated at about 50,000 tons and for this year at about 80,000 tons on the same date.

As regards the freight and other charges on sugarcane, brought from outstations to the factories, I am enclosing herewith two schedules showing the current freight for the carriage of sugarcane over the Bengal and North-Western Railway and East Indian Railway. The average lead may be taken to be about 40 to 45 miles. The average load per wagon on the East Indian Railway is 300 maunds and as regards the Bengal and North-Western Railway the factories generally use either open cane wagons or cage trucks of 10 to 12 tons which is given in the last two columns of the enclosure. On this basis, as you will see, the freight per maund of cane for an average lead of 45 miles on the Bengal and North-Western and East Indian Railways comes to about one and one-half annas per ton or 8 pies per maund. In addition to this, the factories have to incur loading and unloading charges, commission, etc., bringing the extra charges to the factories on cane from outside to between one anna and one anna six pies per maund including the freight.

Enclosure No. 1.

Existing rates for sugarcane on the Bengal and North-Western Railway.

Calculated Rates for Sugarcane and Sugarcane seed for different types of Wagon for distances up to 100 miles.

सत्यमेव जयते

Miles.	Types of Wagon.			
	Open Cane Wagon 14.′	Covered Goods Wagon 16′—4″ and 18′.	Open cane wagon 16′—4″ and cage trucks 10 tons C. C.	Cage trucks 12 tons C. C.
	@ 0-2-6	@ 0-3-6	@ 0-4-3	@ 0-4-9
	Rs.	Rs.	Rs.	Rs.
1—28	5	6	7	8
29	5	6	8	9
30	5	7	8	9
31	5	7	8	9
32	5	7	9	10
33	5	7	9	10
34	5	7	9	10
35	5	8	9	10
36	6	8	10	11
37	6	8	10	11
38	6	8	10	11
39	6	9	10	12
40 41	6	9	11	12
42	7	9	11	12
43	7	9	11	13
44 45	7	10	12	13
46 47	7	10	12	14
48	8	11	13	14
49 50	8	11	13	15
51	8	11	14	15
52	8	11	14	15
53 54	8	12	14	16
55	9	12	15	16

Miles.	Types of Wagon. Open Cane Wagon 14′.	Covored Goods Wagon 16′—4″ and 18′.	Open cane Wagon 16′—4″ and cage trucks 10 tons C. C.	Cage trucks 12 tons C. C.
	@ 0-2-6	@ 0-3-6	@ 0-4-3	@ 0-4-9
	Rs.	Rs.	Rs.	Rs.
56 57	9	12	15	17
58	9	13	15	17
59 60	9	13	16	18
61	10	13	16	18
62	10	14	16	18
63 64 65	10	14	17	19
66	10	14	18	20
67	10	15	18	20
68	11	15	18	20
69	11	15	18	20
70	11	15	19	21
71 72	11	16	19	21
73	11	16	19	22
74 75	12	16	20	22
76 77	12	17	20	23
78 79	12	17	21	23
80	13	18	21	24
81 82	13	18	22	24
83 84	13	18	22	25
85	13	19	23	25
86	13	19	23	26
87 88	14	19	23	26
89	14	19	24	26
90 91 92	14	20	24	27
93	15	20	25	28
94 95 96	15	21	25	28
97 98	15	21	26	29
99	15	22	26	29
100	16	22	27	30

Enclosure No. 2.

Extract from the enclosure of letter No. CR/ST. 36/90/BD., dated the 30th August, 1935, from the East Indian Railway giving the table of existing rates for sugarcane.

Miles up to	Existing rates per wagon.	Miles up to	Existing rates per wagon.
	Rs.		Rs.
35	10	77	19
36	11	78	20
37	11	79	20
38	11	80	20
39	11	81	20
40	12	82	21
41	12	83	21
42	12	84	21
43	12	85	21
44	12	86	22
45	13	87	22
46	13	88	22
47	13	89	22
48	13	90	23
49	13	91	23
50	14	92	23
51	14	93	23
52	14	94	24
53	14	95	24
54	15	96	24
55	15	97	24
56	15	98	25
57	15	99	25
58	15	100	25
59	16	101	25
60	16	102	26
61	16	103	26
62	16	104	26
63	16	105	26
64	17	106	27
65	17	107	27
66	17	108	27
67	17	109	27
68	18	110	28
69	18	111	28
70	18	112	28
71	18	113	28
72	18	114	29
73	19	115	29
74	19	116	29
75	19	117	29
76	19	118	30

Miles up to	Existing rates per wagon.	Miles up to	Existing rates per wagon.
	Rs.		Rs.
119	30	166	42
120	30	167	42
121	30	168	42
122	31	169	42
123	31	170	43
124	31	171	43
125	31	172	43
126	32	173	43
127	32	174	44
128	32	175	44
129	32	176	44
130	33	177	44
131	33	178	45
132	33	179	45
133	33	180	45
134	34	181	45
135	34	182	46
136	34	183	46
137	34	184	46
138	35	185	46
139	35	186	47
140	35	187	47
141	35	188	47
142	36	189	47
143	36	190	48
144	36	191	48
145	36	192	48
146	37	193	48
147	37	194	49
148	37	195	49
149	37	196	49
150	38	197	49
151	38	198	50
152	38	199	50
153	38	200	50
154	39	201	50
155	39	202	51
156	39	203	51
157	39	204	51
158	40	205	51
159	40	206	52
160	40	207	52
161	40	208	52
162	41	209	52
163	41	210	53
164	41	211	53
165	41	212	53

Miles up to	Existing rates per wagon.	Miles up to	Existing rates per wagon.
	Rs.		Rs.
213	53	257	64
214	54	258	65
215	54	259	65
216	54	260	65
217	54	261	65
218	55	262	66
219	55	263	66
220	55	264	66
221	55	265	66
222	56	266	67
223	56	267	67
224	56	268	67
225	56	269	67
226	57	270	68
227	57	271	68
228	57	272	68
229	57	273	68
230	58	274	69
231	58	275	69
232	58	276	69
233	58	277	69
234	59	278	70
235	59	279	70
236	59	280	70
237	59	281	70
238	60	282	71
239	60	283	71
240	60	284	71
241	60	285	71
242	61	286	72
243	61	287	72
244	61	288	72
245	61	289	72
246	62	290	73
247	62	291	73
248	62	292	73
249	62	293	73
250	63	294	74
251	63	295	74
252	63	296	74
253	63	297	74
254	64	298	75
255	64	299	75
256	64	300	75

The Purtabpore Co., Ltd., Gorakhpur.

REPLIES TO TARIFF BOARD GENERAL QUESTIONNAIRE, 1937.

Production of Sugar.

1. This factory was built in 1903. Its present capacity is 800 tons.

2.

Season.	Total maunds. Sugar.	No. 1 Sugar.	No. 2 Sugar.
1930-31	130,963	60,733	70,230
1931-32	184,235	83,940	100,295
1932-33	205,605	119,075	86,530
1933-34	196,883	191,838	5,045
1934-35	169,836	165,592	4,244
1935-36	280,379	279,604	775
1936-37	272,888	271,868	1,020

3. (*a*) The factory is advantageously situated as regards cane supplies, but not of the best quality cane as compared with the Bombay Presidency and the Deccan, but with regard to Limestone the freight is very high amounting to approximately seven times the value of the stone. The same applies to coal and other stores but to a lesser degree.

(*b*) Facilities of rail and road are good. The factory is 4 miles from the nearest Railway but is connected by our own tramway.

(*c*) Adequate labour supply.

4. *Double Carbonation.*—The advantages and disadvantages of the respective processes are as follows:—

Sulphitation.—Lower capital cost, lower operative cost, more careful control required (less "foolproof"), lower grade of sugar produced which is more susceptible to damage in unfavourable climatic conditions, lower yield varying from 2 per cent. with high purity juices to 4 per cent. with low purity juices.

Carbonation.—Higher capital cost, higher operative cost, easier control (more "foolproof"), superior sugar made, less liable to deterioration in the monsoon. Higher yield, from 2 per cent. to 4 per cent. dependent on purity of juices.

The additional capital cost for a factory milling 25,000 maunds per day is about £3,500 e.r.w. The critical factor in deciding the process is cost of limestone as laid down at factory; operative costs are essentially those of stone and coke as against lime and sulphur.

Labour difference is unsubstantial.

5. 1932—

One 2,255 sq. ft. H. S. B. & W. Boiler.	
Extension to Cane Carrier.	Rs.
Cane Knives.	
3—30″ Centrifugals.	
1 Vertical Steam Engine.	
Improvements to Heating surface of Evaporators.	
Improvements to Cooling arrangements for crystallisers	84,765

1933—

Seeding Mixer.	
Extension to Cooling Tower.	
Molasses Tanks	20,914

	Rs.
1934—	
Rearrangement of Boiler Plant by the addition of 2 4,780 sq. ft. B. & W. Boiler in place of 4 old 90 lbs. pressure Multitubular Dismantling 2 1,860 sq. ft. B. & W. Boilers and bringing them into line	1,35,665
1935—	
Rearrangement of Centrifugal department with addition of a complete battery of 4—42″ machine.	
Addition of 2 Juice Heaters.	
Improvement to H. S. of Pans.	
Rewiring of Factory.	
New Electric Generator	1,90,984
1936—	
Extension to Existing 11 roller plant making it into a 17 roller plant with new accessories.	
New mill house and general law out of compound.	1,93,810
Additional equipment to rolling stock in the seven years	26,500
Grand Total	6,52,638

6. With conditions as they are at present, we do not contemplate extensions, but should there be an improvement, we may consider installing further equipment.

7. (*a*) The main factors which determine the size of the factory are the amounts of cane available for milling and the transport facilities.

(*b*) The capacity of the factory should not be less than 400 tons per day.

8. The most of the equipment in sugar factories can now be obtained in India, but non-ferrous metals and tubes, heavy shafts for rollers, etc., boilers and special pumps and engines have to be imported.

9. (i) Have not seen much of their work yet except tabulated data which they have received from the various sugar factories.

(ii) The Government do not inform us of the promulgated cane rates. These should be advised at least 2 days before they are due to come into force.

10. *Raw Materials.*—We undertake cultivation of sugarcane. Our land is both purchased outright and leased (Mokharrie and Ticca leases). As the purchases and leases were obtained some 80/90 years ago the difficulties, if any, are not known.

11. (*a*) 4,350·87 acres.

(*b*) 1,065 acres.

(*c*) Co.210, 213, 331, 281, 299, 313.

(*d*) Rotation 3 years. Cane, fallow, cereal, green manure crop.

Cane.—Green manure crop ploughed in during monsoon.

Manure.—Compost and F. Y. M. at 400 maunds per acre before planting.

Mustard cake 10 maunds.

Double superphosphate 2 maunds per acre at planting time.

Sulphate ammonia 1 maund at ridging time.

(*e*) *Yield per acre by seasons.*

Cane.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.	
Co.213 . .	211	562	520	367	338	422	475	maunds.
Co.326 . .	...	...	...	...	...	423	432	,,
Co.331 . .	...	...	...	...	...	668	656	,,
Co.210 . .	293	288	297	332	267	513	526	,,
Co.281 . .	...	...	...	...	...	...	577	,,
Co.313 . .	...	...	...	...	...	554	603	,,
Co.299 . .	...	...	...	...	...	...	352	,,
Hemja . .	90	...	...	...	...	...	...	,,
							3,621	,,

Average sucrose content.

Cane.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Co.213 . .	...	...	...	...	...	9·03	9·33
Co.326 . .	...	...	...	...	...	9·00	9·29
Co.331 . .	...	...	...	...	...	9·94	8·26
Co.210 . .	...	...	...	...	..	9·45	9·27
Co.281 . .	...	...	...	...	...	11·89	11·00
Co.313 . .	...	...	...	...	...	10·65	10·63
Co.299 . .	...	...	...	...	...	10·58	10·62

12. (*a*) Approximately 23 acres set aside for experiment including a nursery for new varieties.

(*b*) Selected seed is given out for sale from our own crop.

13. Early and late varieties have had their comparative yields tested by variety trials together with Mill trials to show their sugar content.

Other experiments.—Proportionate and quantity values of Nitrogen Phosphates and Potash. Comparisons between inorganic and organic manures, the latter being split up into two classes—(*a*) Cakes, (*b*) F. Y. M. or Compost. Spacing experiments and comparisons between ordinary and trench planting.

The Agricultural Department have helped to supply us with seed of new varieties.

Advice has been given by the Deputy Director of Agriculture, North Bihar, and his staff, both on Company's Estates lands and in the dehat to cultivators, considerable demonstration work has been carried out with the cultivators in the use of improved varieties of cane, of implements, on sowings, inter-cultivation the use of fertilizers and the preparation of cane trash compost.

14. (*a*) A very considerable increase both in area and maundage, the latter being chiefly due to the cultivation of Co. varieties.

(*b*) The quality of the cane has been subject to seasonal variation—*vide* reply to Question No. 80—Form III.*

15. We very seldom have damage from frost but from disease and insect pests the damage is very considerable. During the month of February this season a detailed survey was carried out to determine to what extent the cane was infested with disease and this worked out to 31·1 per cent. on the average causing a sugar loss of 5,035 maunds for the month or Rs. 30,210 monthly.

16. A sufficient supply of cane is assured only in the absence of competition. Principal varieties are Co.210, 213 and Hemja.

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* Not printed.

The average yields are as follows:—

Co.210	175
Co.213	250
Hemja	150

For sucrose contents see reply to Question 80, Form III.*

17. Competition by factories has had a considerable influence on supplies and price. Competition has in the past been severe towards the end of the season. Attractive prices and cash payments have encouraged the increased area in cane.

18. (*a*) Yes.

(*b*) Causes stated above in 17.

(i) A defect of rain lowers the yield. Excess even where flooding has occurred increases the yield and leads to early ripening.

(ii) Prices originally obtainable for sugar have been the origin of the astounding growth of the Indian Sugar Industry.

The raw material supply has therefore increased.

(iii) No effect.

(iv) No effect.

19. Requirements is an elastic term. Regulation rather than restriction is indicated. We have been able, by extending the duration of the season and by additions to plant to take off practically all the cane which was offering in the areas serving our factory. We consider that control of the area under cane in Northern India is desirable, but coupled with a reduced production of sugar by white sugar factories, so that the quantity of cane available for manufacture conforms to a reduced output from the factories, so as to bring consumption and production into line.

While expressing this opinion we realise the great difficulty in co-ordinating the area to be put under cane with factory production owing to the millions of independent growers involved and the variations in yield per acre as influenced by seasonal conditions and the uncertainty as to the ultimate utilization, *e.g.*, gur or white sugar or eaten in the raw state.

		Rs.	A.
20.	Preparation	2	8
	F. Y. M.	17	8
	Planting—		
	Seed	9	3
	Plough	1	2
	Labour	0	14
	Hoeing 6 times	4	2
	Rent	5	4
		40	9

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21. One, and possibly the greatest, objection which the ryot has to the cultivation of cane is the duration of time which it takes between the date when he has to reserve land for the crop till he receives money for its proceeds. This is not less than eighteen months unless he has cultivated an early ripening variety of cane. To partly overcome this difficulty we make a practice of advancing money to the ryot.

Then there are the difficulties of harvesting the crop—the diversion of labour from other agricultural pursuits and the loss of bullocks' time from farm work involved in the transpot of cane. It is these difficulties which have so encouraged the practice of ratooning cane which even from the point of view of perpetuating disease should be discouraged if not prohibited by law.

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*Not printed.

With a view to popularising the cultivation of cane we have the following suggestions to make:—

(1) The supply of sound seed cane of approved varieties. It is notorious that if left to his own devices the ryot will plant from the worst portion of his crop. This is where the Agricultural Department can do most valuable work.

(2) The encouragement to factories to acquire land for the establishment of seed farms, from which good seed cane could be distributed. Government could assist in the acquisition of land for this purpose by suitable legislation.

(3) Intensive education of the ryot in the best agricultural practice for the cultivation of cane, including the intelligent use of suitable fertilizers. The system of education to be that best suited to local conditions.

(4) An examination of the prospects from irrigation by tube wells and canals might be valuable.

(5) Every possible encouragement to be given to factories to lay down local tramways for the carriage of cane, so reducing the strain on the ryots resources in providing bullock transport.

(6) Such terminal organisation at factories which will reduce as much as possible the time lost in keeping carts waiting to unload. We favour a system which ensures a cart being able to transfer its load as soon as possible after its arrival at the factory or other delivery station.

(7) The provision of good road communications and we should particularly stress the maintenance of good bullock cart tracks.

(8) We would advocate that Government should prohibit the weighment of cane during the hours of darkness except at factory or tramway depôts. It is our belief that when lighting facilities are very inadequate, as they generally are, the weighment of cane at railway stations tends to lead to abuses, however, zealous the inspecting staff may be. If there were proper organisation there should be no hardship in restricting weighments to daylight hours.

(9) To ensure better control of cane deliveries at railway stations and factories the system of issuing passes for carts which we employ should be made compulsory. This by reducing the time carts are kept waiting would reduce transport charges where ryots employ professional carters for the carriage of their cane and save sugar losses due to stale cane. We also suggest that carts should be licensed.

22. (*a*) No other views than that of the Tariff Board.

(*b*) We have insistently advocated the introduction of a system of "zones" for sugar factories. If this had formed a part of the legislation which was introduced at the time Government decided to grant protection to the sugar industry many of the difficulties with which the manufacturing side of the industry is now confronted would never have arisen. We fear that in some areas it is now too late for any effective legislative action to be taken, but there do exist areas where conditions make it possible for groups of factories to come to a mutual agreement for the equitable distribution of local supplies of cane, and in this Government might be of assistance in an advisory capacity.

23. Our policy is, and has always been, to do everything possible to develop local supplies of cane, by means of loans in cash at reasonable rates of interest—the supply of sound seed, manures and the provision of rubber-tyred carts on the hire-purchase system. It will be naturally realized,

however, that if a factory's local supplies of cane are liable to be taken by outside factories, there is obviously less encouragement to the home factory to undertake development measures.

24. We are in favour of the regulation of sugar production by means of quotas, and also the licensing of new factories, including extensions to those at present in existence.

Until there is a definite and material increase in domestic consumption, India's production of sugar may now be accepted as having reached saturation point, and to avoid the evils of over-production we consider that Government should at once take powers to limit the quantity of sugar which may be manufactured under a system of quotas. This remedy will not, however, be of any avail unless, linked thereto, the establishment of additional factories is prohibited and any extensions to the plant of existing factories, except for the purpose of increasing efficiency or improving the quality of the product. This question becomes highly complicated by the position of Indian States towards the erection of their own factories and the export of sugar thus made into British India with possible non-reciprocity, but even if a satisfactory solution to this difficulty cannot in all cases be found, our opinion remains unaltered, that the regulation of sugar production in British India in the manner suggested is essential to the well-being of the industry and to the many interests dependent upon it.

In this connection, we would emphasise the necessity of a decision being reached, if possible, before the end of the current year so that the cane planting programme during the ensuing winter can be worked out in relation to the sugar requirements of the country for the Crushing Season of 1938-39.

25. Proportion of cane supply:—

Station.	Season.						
	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Gate . . .	40·76	37·19	38·06	42·53	36·31	31·72	36·28
Tramway . .	45·40	35·40	34·46	46·43	54·91	64·89	61·47
Rail . . .	13·84	27·41	27·48	11·04	8·78	3·39	2·25
Total .	100·00	100·00	100·00	100·00	100·00	100·00	100·00

The increase in gate and tramway is due to increase in local supplies enabling us to do without rail supplies.

26. Gate supplies are entirely transported by carts. Average weight of cane carried by carts equals 25 maunds. We have no improved types of carts.

27. Mileage of roads adequate.

Condition of all roads disgraceful.

28. Cane may be broubht in from up to 12 miles by road to our purchasing centres. Average time taken between cutting and delivery would approximate seven hours.

During road transport cane is not protected from deterioration.

29. Average cost of transport is not known. Cane growers both employ their own carts and hire them.

Average cost of hiring.—For 1st mile ½ anna per maund. Over 1 mile a further pie per maund per mile.

30. No tolls are levied on carts supplying this factory.

31. The supplies for our daily requirements are purchased at 3 centres—

Two tramway heads.

One factory gate.

Each area supplying each centre is divided up into circles.

Each circle is given a certain daily supply to bring in to its supply centre.

Thus a daily requirement for the mills 24 hours work is weighed in at 3 centres. This method ensures a detention of not more than 2 hours. To ensure this, arrangements are made with near by growers not to cut their cane before the actual day of purchase, thus allowing distant carts to be in first at the centre and released. This arrangement has worked satisfactorily since 1925.

32. See (28).

Railway arrangements for transport of cane are satisfactory.

33. There is a scale of charges for each type of wagon per mile with a minimum rate per type of wagon and same is given herewith:—

Type of wagon.	Rate per mile.		Mininum rate per type of wagon.
	As.	P.	Rs.
Open cane wagons, 6, 8 and 10 tons 14 ft. .	2	6	5
Open cane wagons, 10 tons 16 ft. and 11 tons 15 ft.	4	3	7
Cage trucks 10 tons	4	3	7
Cage trucks 12 tons	4	9	8
Covered wagons	3	6	6

These rates have been in force for several years now and are higher than they were eight years ago but the present flat rate basis is preferable to a maundage basis as cane being a bulky article does not fill wagons to their axle carrying capacity, and to introduce a maundage rate would, we feel, inevitably increase the freight costs as the Railway would calculate the contents of a wagon on the carrying capacity rather than its actual load which is considerably less.

34. See Question 3 (*a*).

35. Eleven miles.

4 pies per maund.

The charge is borne by the factory.

36. Very advantageous.

37. The loss through dryage and deterioration between cutting and milling varies according to the variety of cane but the loss is definitely serious in the months of March, April and May. The results of numerous tests carried out during these months in Season 1932-33, indicated that the loss in weight through dryage amounted to 2·5 per cent. after 24 hours, 5 per cent. after 48 hours and 7 per cent. after 72 hours. Apart from the loss in weight, the purity of the juice in the cane deteriorated by one unit after 24 hours, five units after 48 hours and nine units after 72 hours. A detailed account of dryage and deterioration of cane varieties in Upper India is given in the 1933 issue of the International Sugar Journal.

38. Only cane transported by rail is purchased through agents. This proportion is given in answer to Question No. 25.

We are definitely opposed to the employment of contractors unless they possess marked influence and have a financial stake in the area in which they operate.

39. We help the local cane growers in many ways including advances of seed, manure and sun hemp seed. We also give technical advice and loan implements and give demonstrations on Assamie's fields.

40. We pay a commission of Rs. 3 per cent. up to February on factory weights.

Rs. 3-8 per cent. in March.

Rs. 4 per cent. from April.

Weighments and payments are made direct by our own staff at purchase centres.

41. No.

42. We have 3 weighbridges at each purchasing centre. Two are for gross weighments. On these weighbridges the gross weighment is taken and entered up on the cane receipt, the cartmen being given a pass with his gross weighment written on it. The cartman empties his cart at the cane carrier, if at the factory, or onto the trucks if at the tramway head, and then returns to the 3rd weighbridge where he gives his pass and his empty cart weight is entered up in his cane receipt which is waiting for him. The necessary entries are made and the cane receipt is handed over to him in triplicate. There is at each purchasing centre a Cashier with sufficient cash to pay on demand any receipt given in.

43.

1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37
0-5·27	0-5·15	0-5·01	0-5·11	0-5·73	0-5·13	0-4·21

44. The price paid is that fixed by Government which varies according to the price of sugar.

45. We do not consider the price of gur/jaggery or khandsari sugar alone has any relation to the price of cane in this locality.

46. There have been considerable variations. We presume these variations are caused by the relation supply bears to demand.

47. Prices have been paid in excess of Government fixed minimum rate in competition for supplies towards the end of the season.

48. Under present conditions, the basis is not satisfactory and calculations should be based more on the rates obtained for sugar by average factories than on the special rates obtained by a few factories employing more expensive processes. We feel that the rates are based on a small proportion of special sugars which are being produced by certain factories.

We would also suggest that the 8-anna margin which is at present used in arriving at a scale be reduced to enable the cane rate to be adjusted more frequently and equitably. We may have further suggestions to make at an early date.

49. Once a new variety of cane has been introduced into the dehat, there should be no need for the payment of bonuses. In support of this statement we give two reasons: (1) The new canes which are now being released are all capable of producing good yields per acre, and once the Assamis have tried them there is no reason why they should not consider them as good as Co.210, 213 and Hemja, (2) When the Assamis have found that the new varieties give them a fair yield the advantages of knowing when they plant a field, in which month it will be cut, is so great that they will certainly realize their value in a very short time. Bonuses, therefore, may be required to introduce a new cane into the agricultural world which is always conservative, but they should not be necessary once that idea has taken a hold.

50. The duration of the crop for the past seven seasons is given under Question No. 80. The variations in the duration can be attributed to available supplies of raw material and the economical operating purity of the cane supplies.

Until such time as early and late ripening varieties have been established, it is our opinion that the economic duration of a cane season can be given as from 1st December to 15th April.

51. It is possible that by the introduction of well established early and late varieties of cane to extend the crushing season in North Bihar and Eastern United Provinces from, say, 1st November and 31st May or a seven-month operating period.

52. The Government agricultural centres have given us a great deal of assistance but we hope for more, especially with regard to the control of disease and insect pests.

	Seasonal Labour.		*Silent Season.*
53.	1. Skilled . .	227	Total 185 of which about 75 per cent. is skilled labour.
	2. Unskilled . .	392	

54. None.

55. This does not apply.

56. We have a School and quarters to accommodate a few who work here seasonally and whose homes are too far away to go to after duty. Free medical attention is provided and we have our own Dispensary.

57. Our fuel requirements are supplemented by coal and the details are given below:—

1930-31.			1931-32.			1932-33.			1933-34.			1934-35.			1935-36.			1036-37.		
Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
22,582	3	6	25,970	11	3	21,230	4	0	28,434	12	0	12,226	14	0	8,474	9	6	19,520	13	0

We do not bale bagasse.

58. Molasses, bagasse and press mud.

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	Season.	Maunds Molasses Produced.	Average selling price. Rs.	A.	P.
59.	1930-31 . . .	49,662	1	2	2
	1931-32 . . .	70,838	0	11	0
	1932-33 . . .	81,541	0	3	0·3
	1933-34 . . .	78,839	0	0	3
	1934-35 . . .	61,354	0	0	6
	1935-36 . . .	96,707	0	3	0
	1936-37 . . .	95,868	0	1	4

The general fall in price is due to supply being much above demand.

60. We consider railway facilities are inadequate. Our molasses are sold at factory tanks with the exception of the last two years when we transported our molasses in tank trucks to the station and there pumped them into metre gauge molasses tank wagons on purchasers account.

61. Surplus waste molasses are destroyed in a Brooks Molasses Furnace or utilised for steam generation. For steam generation purposes, molasses are not very satisfactory on account of the large deposit of ash of a corrosive nature on boiler tubes, etc.

It is suggested that molasses may be utilised for the production of Power Alcohol, Acetic Acid, Ether, Chloroform, Glycerine, Acetone, Citric Acid, Butanol, Carbon Dioxide for dry ice and Yeast.

62. At present there is no outlet for surplus bagasse, small quantities only being taken by the cane suppliers as fuel.

Bagasse could be manufactured into paper or boards but the initial cost of the manufacturing plant will be high.

63. Sulphitation and well weathered carbonation press mud can be utilised as a manure.

		Stock of sugar on 1st November.		Stock of sugar end of crushing season.		
		Mds.		Mds.		
64.	1930-31	9,395	0	82,235	0	0
	1931-32	14,910	0	101,412	20	0
	1932-33	6,500	0	152,362	20	0
	1933-34	43,862	20	24,102	20	0
	1934-35	...		70,582	20	0
	1935-36	70	0	193,479	2	12
	1936-37	15,877	8	175,095	0	0

65. Our storage is in stacks, built up on sleepers.

Capacity 97,560 bags of 2½ maunds each.

Increased this year by building a godown 250 ft. long × 100 ft. wide.

66. The extent to which sugar may deteriorate is chiefly dependent upon the period of storage and weather conditions. Apart from the period of storage and weather conditions factors influencing the keeping quality of sugar are numerous but it may be stated that the construction and condition of the godowns in which sugar is stored, temperature at which the sugar is bagged, packing, stacking and stacking medium employed together with sugar quality all play a part in the keeping quality of sugar.

67. Damaged sugar is usually reconditioned.

68. The production of sugar of greater purity of bold and regular crystal free from dust and broken grain, will undoubtedly improve the keeping quality.

69. The damage of sugar in transit from the factory can be attributed to the type of rail wagon or flat used and weather conditions during transhipment.

70. At times when booking is closed.

71. Water-tight wagons should be provided for sugar traffic. These wagons may be used in grain or cereals transportation but not for coal, oil or any other material which may thus spoil the floors of the wagons for sugar transport.

72. Our sugars are sold on an f.o.r. Factory basis, the price being one for important markets. We have no record of secondhand prices for our product at the ports and up-country, but give below the actual f.o.r. prices

obtained during the past 7 years. We also give the freight from the factory to the ports and certain up-country markets:—

F.o.r. Prices.

Seasons.	1st Sugar.			2nd Sugar.			Both Sugars.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1930-31 .	9	5	8·4	8	3	1·8	8	11	9
1931-32 .	10	5	9·2	9	5	2·6	9	12	9·1
1932-33 .	9	0	7·7	8	2	0·7	8	10	6·9
1933-34 .	8	6	2·4	8	3	6·4	8	6	1·6
1934-35 .	8	6	3·1	8	10	6·7	8	6	4·4
1935-36 .	8	9	2·8	7	1	0	8	9	2·4
1936-37 .	6	7	6·2	...			6	7	6·2

Stations.	Rail freight.			Rail and Steamer freight.	
	Rs.	A.	P.	As.	P.
Allahabad	0	7	0	...	
Cawnpore	0	9	5	...	
Lucknow City	0	9	1	...	
Calcutta	0	12	0	10	9
Bombay	1	0	3	13	11
Madras	1	0	0	13	11
Karachi	1	1	3	13	11

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73. We enclose copies of Balance Sheets.

74. We give below amounts of depreciation written off by the Company from 1930-31 also the statutory amount allowed under the Income-tax Act, 1922. Depreciation is usually a round sum based, as nearly as possible, on the statutory scale—

	Statutory.	Written off.
	Rs.	Rs.
1930-31	1,13,340	1,25,000
1931-32	1,20,405	1,30,000
1932-33	1,21,456	1,20,000
1933-34	1,31,050	1,00,000
1934-35	1,33,863	50,000
1935-36	1,35,895	1,50,000

75. No amounts have been set aside for Reserve Fund.

76. We give below amounts distributed as dividends by the Company:—

31st October.		Rate.	Amount.
		Per cent.	Rs.
1932 . . .	Pref.	10	1,80,000*
	Ordy.	10	90,000
1933 . . .	Pref.	10	60,000
	Ordy.	10	90,000
1934 . . .	Pref.	10	60,000
	Ordy.	7½	67,500
1935 . . .	Pref.	10	60,000
	Ordy.	...	...
1936 . . .	Pref.	10	60,000
	Ordy.	7½	67,500

77. The Bank allows overdrafts under agreement for cash credit, by which stocks, etc., are pledged. The rate at which the Company is able to borrow is bank rate subject to a maximum of 7 per cent. and a minimum of 3 per cent.

78. Head Office expenses and Managing Agents' commission amount to Rs. 16,216 for 1935-36.

Managing Agents commission is calculated at 7½ per cent. on the net profits before providing for income-tax but after providing depreciation as follows:—

On the prime cost of—

Machinery at 7½ per cent., Buildings at 2½ per cent., Tramways and Equipment at 10 per cent.

79. Considering the hazardous nature of the enterprise, the risks of drought, floods, pests, the machinations of buyers, the Excise Duty, the costs of maintenance, the demands of taxation, a balance of 10 per cent. at credit of revenue, after allocations to depreciation and reserve accounts is not excessive.

80. Forms 1, 2 and 3 referred to are attached.† As regards Forms 1 and 2 the figures in respect of 1936-37 cannot be submitted as our financial year is not yet closed.

81. Owing to the complicated nature of the returns called for we are unable to submit the information in the allotted time, and we will do so as soon as the returns are completed.

82. Every possible economy has been effected in the works and efficiency brought to a high standard, comparing favourably with other sugar producing countries, that there is very little margin for further reductions in the works and we must now look to a higher sucrose content and for further reductions in cost of cane.

83. Central Provinces.

84. We are unable to give particulars of the relations between dealers and retailers, but so far as we are concerned, we are put into touch with our dealers by our brokers. Up to this year we had several brokers working on a commission basis from 8 to 12 annas per Rs. 100. These brokers would make us offers, which, if accepted, would be confirmed by contract between ourselves and the dealers, a deposit being required as Earnest Money, which the dealers paid; interest was allowed on this deposit. During the current season, we have obtained Sole Distributors for the whole of India—Messrs. Ralli Bros., Ltd. While the system of their making us offers

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* For three years to 31st October, 1932.

† Not printed.

on behalf of dealers still continues to a lesser extent, the chief method of doing business is for us to give them option for a fixed period on quantities of each grade of sugar which we wish to dispose of, fixing the minimum price at which they can sell. In this case also, the arrangement between them and ourselves is by agreement, the actual contract, which is supplementary to the agreement being entered into primarily between them and their dealers.

85. The new I. S. M. A. contract form is satisfactory except as regards Clause 8. The responsibility for the condition of sugar *sold f.o.r. factory* should be more clearly defined, as falling upon the buyer. Unless the buyer takes delivery at factory it is impossible to prove in what condition the sugar was despatched, and whether damage took place while in the hands of the carrier.

86. The figures with regard to this question can be obtained from dealers, importers and brokers. We ourselves are unable to give accurate figures, especially as most of our business in the past has been done through dealers in the Cawnpore market, and on an f.o.r. factory basis.

87. Variations in this case will occur when comparing wholesale forward business with ready petty sales, but for spot business there is little fluctuation between wholesale and retail prices, though the difference between these actually varies according to quantity, up to approximately 4 annas per maund.

We have taken the retail prices as covering lots of 5 to 25 bags, which are not necessarily in shopkeepers hands, there possibly being a further difference in the actual shop price to the consumer.

88. We have very little information as to the storage arrangements made by dealers, but from our experience we understand that they are disinclined to keep stocks, preferring to utilise factory storage space, even to the extent of getting 3 or 4 months in arrears in deliveries. We have already given you our experience with regard to deterioration in storage against Question No. 66. We have no definite information with regard to conditions prevailing in dealers' godowns.

89. Under similar storage conditions we are of the opinion that Java sugar will deteriorate to the same extent as a good quality Indian sugar.

It is only in very recent years that the keeping quality of sugar produced in India has become a subject for serious consideration, since large stocks of sugar must now be stored throughout the monsoon period. Since it has been recognised that there has been a vast improvement in the quality of sugar manufactured in India, the keeping quality has also undoubtedly improved.

90. With the exception of the demand for Indian made sugar by a limited number of orthodox Hindus on religious grounds, Java, or other imported sugar is preferred, particularly by the middle and upper class Indian consumers. The reason for this is, we believe, the uniformity of grain and superior, consistent colour of the imported sugar.

91. The average quality of sugar manufactured in India is inferior to imported Java sugar but there are many factories in India producing a final product equal if not superior to that of Java.

The average Indian sugar is inferior to imported Java sugar in respect of purity, colour and uniformity of crystal size.

92. In our opinion the manufacturers carry the bulk of the stocks of Indian made sugar, the only dealers carrying stocks to any large extent being those at ports where storage facilities are offered by the Carrying Companies. Up-country dealers normally carry only sufficient stock for the immediate need of local retailers.

93. Yes. We consider this most desirable.

94. We favour a Central All-India Selling Organisation, provided licensed control of production is also introduced. We consider, however, that it should be independent of Government control.

95. We think that the present system of standardisation is open to grave question. The value of a sugar does not depend on the size of the crystal or on its appearance in bulk in a glass container. Further, it is impossible to get two observers to agree as to the standard on such a crude system. This reply is continued in the attached note.

96. (*a*) We have done no business so far on the basis of sugar standards. The reason we have not yet sold on this basis is that the graduated scale of price difference has not yet been agreed upon and the Industry as a whole is not prepared to sell on the basis of standards. It is also felt that most factories are not yet in a position to turn out a uniform product capable of being graded under the standards.

(*b*) Yes. These standards are being used extensively at all our factories for internal control.

97. As opposed to standardising sugars, Messrs. Begg, Sutherland & Co.'s Group of Factories are to base their selling standard in respect of the next season, as follows:—

> Factory Managers are to be asked to lay aside a certain number of bags of sugar now of a standard which they expect to maintain during the next season. These bags are to be used as samples next season and the output based on these samples. Special care will be taken in storing these bags during the monsoon.

98. The possibilities of establishing a central marketing organisation, including a complete survey of markets, has been before the Indian Sugar Mills Association from time to time, but no progress has been made. We are in favour of an organisation on the lines of the Cement Marketing Board being set up, provided its control is vested in an independent body and it embraces all producers, with Government prohibition of new factories and extensions for purposes other than improvement of quality and efficiency.

The establishment of a "futures" market by dealers Associations, on the lines of the East India Cotton Association should make for stability in prices by providing security for dealers operations, and thereby improving the general trade in sugar.

99. Over a period of seven years we believe the consumption of sugar, including Khandsari, and sugar refined from gur, to be about 1,300,000 tons annually, but as a result of the lower prices now ruling this figure should be exceeded.

An increased advertising campaign by the Industry through its Associations and possible collaboration with the Tea Industry would, we believe, lead to increased consumption, the necessary funds being provided on the lines of the Indian Tea Cess.

100. We believe that factory sugar is replacing gur in the trade in increasing quantities, but we have no reliable information.

101. We see no immediate prospects of the establishment of fruit canning in India.

102. This information can be given much better by importers such as Messrs. Ralli Brothers, Ltd., Calcutta, Bombay, Madras and Karachi, Messrs. A. H. Bhiwandiwalla, Bombay, Messrs. Parasram Paroomal & Co., Calcutta, and Messrs. Kian Cwan Co. (India), Ltd., Sassoon House, Calcutta.

103. It may be accepted that Java, the chief importing country, has not realized remunerative prices for her sugars in any year between 1930 and 1936. In support of this view there is the knowledge that Java's production has fallen from 3,250,000 tons in 1930 to 500,000 tons in 1936.

104. None by sea so far as we know. A relatively small quantity finds its way across the Northern Frontiers. We do not consider India could profitably export sugar unless world prices advance very considerably and then only if Indian sugar received specially favourable treatment on entry into the United Kingdom. There is, of course, the very remote possibility

of India being in a position to sell a portion of her production for export at a loss, provided there was a compensating rise in internal prices.

105. The imposition of the first levy of excise had some effect in not inducing unadvised expansion which would, however, have been better prevented by a system of licensing and zoning at the time protection was given, and in relation to a considered estimate of the demand existing for sugar in India. The latter imposition coincided with a period of abnormally low prices for sugar, which persists to-day. Owing to trade conditions the manufacturer except for a very brief period has not been able to pass on any share of the excise to the consumer. We have never understood why the cane-growing section of the industry has not been called on to bear some share of the excise. The industry could have accepted with comparative equanimity a levy on profits on a reasonable scale.

106. A certain quantity is absorbed in the manufacture of country tobacco. Where distilleries exist molasses form a base for the production of alcohol. Recently a molasses exporting corporation has set up an organisation for the collection and export of molasses and has made extensive purchases. No data is available with us regarding the extent of these transactions but they must be of considerable magnitude. The prices realized do little more than cover handling charges. The residue we destroyed in specially designed furnaces.

107. This has partly been dealt with under the preceding question. We understand the destination of the molasses exported by the Corporation is the United States and the United Kingdom and it is used for the production of industrial alcohol. The possibility of export is handicapped by the inadequacy of transport facilities.

108. We are not altogether clear as to what is meant by " effective ". If the development of an industry by an increase in production of 1,000,000 tons is effective the answer is " yes ". If " effective " means the establishment of an ordered industry with security of capital combined with sound finance the answer is " no ".

The effect of the import tariff, created in 1932 has been to create a barrier against imports from abroad behind which the industry has developed at an extraordinary rate of progress—a very unhealthy rate as events have turned out. This expansion has taken place without any control either by Government or the industry itself. What appeared to be an attractive outlet for capital seeking employment has resulted in the launching of numerous undertakings without any proper consideration being given to local conditions. Supplies of suitable raw material—financial requirements and in many instances without adequate, or even any, expert knowledge. The result has been that although India has been rendered self-supporting as regards her sugar requirements, her revenues have suffered severely from an almost complete stoppage of imports, while the domestic industry due to the reckless establishment of factories—many of which are unsuitably situated, the need of replacing revenue hitherto realised from the import tariff by the imposition of an excise duty—an utter absence of any organization for the marketing of its sugar finds itself to-day confronted with a situation which, to say the least of it, can only be described as extremely critical even in the case of the most efficient units of the industry.

109. The original object of protection aimed at the country producing its total sugar requirements, and this object has already been attained. We therefore consider that the extent of protection should be kept at such a level as to limit imports of foreign sugar.

We are of opinion that the existing level of protective duty is such that the ryot obtains an equitable return for his enterprise, and that this will only continue provided the position is not aggravated by imports of sugar from abroad.

It does not follow that world conditions will remain unaltered between now and 1946, and we therefore recommend the present level of protection being maintained, and further, that the Government should take powers to regulate it as and when necessary, to limit the entry of foreign sugar into the country.

110. (1) Improvement in Agriculture and communications and the application of research so as to reduce the cost of cane and improve its sugar content.

(2) Means to control borer infestation and simultaneously increase the sugar content of the cane.

(3) The adoption of the zoning system which will allow factories to help the small grower to make use of the results of research.

(4) Means to ensure the manufacturer obtaining a fair share of the protection by correlation between the cost of cane and effective selling price of sugar (after deduction of excise) which will demand a centralized marketing organisation with power to regulate sugar prices.

111. So far as we are aware, no industry has been affected by the import duty on molasses.

Annexure.

Continuation of Reply to Question 95.

We would favour standardisation on rational lines which would include:—

1. The polarisation or sugar content.
2. The colour determined in some formal way in an apparatus such as the Lovibond Tintometer and expressed in definite colour units.
3. The quantity of suspended matter.
4. Possibly, but not necessarily, the quantity of ash might also be included. Ash is of importance to the sweetmeat maker but he is not yet educated enough to appreciate its influence.
5. Uniformity of grain and absence of dust may also be included.

Noori Sugar Works, Gorakhpur.

Answers to the General Questionnaire.

1. The factory started in 1924. The full capacity is 500 tons.

	Season.	Grade I.	Grade II.	Total.
		Mds. Srs.	Mds. Srs.	Mds. Srs.
2.	1930-31 .	62,065 0	18,292 20	80,357 20
	1931-32 .	91,517 20	62,762 20	154,280 0
	1932-33 .	100,070 0	73,722 20	173,792 20
	1933-34 .	91,610 0	70,922 20	·162,532 20
	1934-35 .	51,405 0	37,280 0	88,685 0
	1935-36 .	107,035 16	71,517 20	178,552 36
	1936-37 .	90,103 33	64,033 0	154,136 33

3. (*a*) Yes. Yes.

(*b*) No proper communication other than railways.

(*c*) Yes.

4. Double Sulphitation.

In this process the plant runs cheaper, and the process itself is the least expensive, while on the other hand the Carbonatation process is more expensive, though more positive in its action and gives a higher recovery and the sugar produced is always of a better quality.

5 & 6. *Nil.*

7. (*a*) The main factors which may help in determining the size of the economic plant are, Cane supplies, labour, markets for the distribution of sugar, availability of other raw materials and facility of transport.

(*b*) 400 to 500 tons.

8. India has greatly improved in supplying parts and materials for the sugar factories and the factories are not now very much dependable on foreign markets for the supplies of their requirements.

9. (i) We had none so far.

10. No. No.

11. (*a*) to (*f*) *Nil.*

12. (*a*) & (*b*) We have no cultivation at all.

13. No cultivation and hence no experience.

14. (*a*) The quantity of cane has gradually increased.

(*b*) The quality has not changed very much on the average side.

15. Have no idea.

16. Yes, the varieties of cane crushed in our factory are Co.213, 210 and *Desi* quality.

The average yield per acre has varied between 300 to 500 maunds. Regarding sucrose content of each variety no records are maintained by us.

17. We have not experienced any competition for the last two years.

18. (*a*) No.

(*b*) (i), (ii), (iii) & (iv) Does not arise.

19. It is not in excess of requirements in this area. We do not consider any restriction necessary.

20. We have no cultivation and therefore, are not in a position to furnish the desired information.

21. In cultivation there are not big difficulties. The growers, however, feel difficulties in delivering the cane to the factory due to very bad cart roads, or in places there being no direct roads leading to the factory.

22. (*a*) In our opinion there objections still prevail in full force and the acquisition of land for factories purposes should be left to voluntary negotiations.

(*b*) This question does not interest the factories of Western and Southern India, because they have their own forms or have gone in agreement with ryots. Thus in both ways they get definite supply of cane. This question is of importance for United Provinces and Bihar only, where the growth of new factories have altered the conditions since the date of the last Tariff Board's report. The enforcement of Act XV of 1934 has removed the zoning objection from the ryots' point of view though no insuperable difficulties have been yet experienced. To introduce a system of zoning, it would be desirable both to remove the uneconomic competition for cane and the factory owners must establish a personal and intimate relation with the ryots.

The working of the system should be entrusted to a Committee represented by all the factory owners in the zone, two of the ryots' members of the zone, and a Government official member. Such a Committee ought to meet year by year to define zones by allotting separate area of fields to the individual factories or should define the centres of purchase of cane to avoid competition of factories. This Committee must act without rigidity and ought to be conscious of the changes in economic and crop condition which require alterations in zones.

23. The development of feeder roads is the legitimate function of the local boards. As regards the advances of cash to ryots, I may say that several factories make them already. Such advances ought to be purely voluntary. If summary powers were provided to recover these advances, the process of advances would be facilitated.

24. (*a*) The bigger factories over and above 700 tons should totally be stopped from making any further extensions while smaller factories which are really unbalanced may be permitted (if they so desire) to make extensions to bring the factory in line with others, and to minimise the losses they undergo for want of the balanced houses.

(*b*) The erection of new factories should in all cases be subject to a license.

	Season.	Gate cane. Per cent.	Rail cane. Per cent.
25. (*a*) & (*b*)	1932-33	58	42
	1933-34	54	46
	1934-35	...	...
	1935-36	59	41
	1936-37	98	2

(*c*) We have no tramways near about.

In our factory it varies because previously no care was taken to control the gate cane.

26. Our cane is entirely transported by carts and small boats. We have no other means. Average weight of the cane carried per cart is 16 maunds. No improvement in carts is possible in these areas due to lack of roads. We have employed no such improved type of carts.

27. Main and feeder roads are both in a bad condition.

28. The cane is drawn from the area of between 8 miles radius of the factory. The average time taken is about 36 hours.

29. In most cases the highest average cost of transport of cane by carts works out maximum ⅓rd of a pie per maund per mile.

30. *Nil.*

31. Efforts have been made with success to regulate the supplies according to the daily demands. The average of detention of carts at the factory has seldom been over 15 to 20 hours.

32. Mostly from a distance of 50 miles and the time taken between cutting and the delivery at factory is between 40 to 60 hours.

Railway transport is satisfactory.

35. We do not have any tram-cars in our area.

36. Tramway system may be advantageous, but there will surely be special difficulties in laying out the system.

37. No.

38. (*a*) Gate cane is all purchased direct from the growers.

(*b*) Rail cane (if any) through purchasing agents or contractors.

40. We mostly purchase direct from the growers and a small portion of out-station cane is taken through the contractors on which we pay a commission of Rs. 1-9 per hundred maunds inclusive of all expenses.

41. No.

42. We have two standard weigh-bridges for weighing loaded carts; two weigh-bridges for weighing empty carts.

We maintain three payment houses during the season and the payment is made whenever desired by the supplied. Anyhow, the time of payment does not exceed 24 hours since the demand is made.

43. Previous records are not available. In this season we have been going with the Government rates changes.

Yes, they usually do.

44. It did not before the sugarcane prices were regulated by the Government. The minimum prices fixed by the Government as well could not bear any relation to the price of sugar.

45 & 46. We have no idea.

47. We have paid excess prices of sugarcane over and above the rate fixed by the Government, only in cases when the sugar prices were over and above the cost of production and the supplies of cane were considerably reduced.

48. No, the basis on which the minimum prices are fixed are not satisfactory, because the fall in the prices of sugar leads to a fall in the cane, which in turn leads to a fall in the price of sugar and thus the prices go on. The fortnightly revision of the price has created uncertainty in the minds of both the ryots and the factory owners, whose stock of sugar produced from the cane purchased at higher prices deteriorate in price when the cane price is lowered subsequently. The price of the sugar ought to be fixed on the cost of production as ascertained by the Tariff Board in the present enquiries and not on the price of the cane. The prices fixed at the commencement of the season must at least be maintained up to the end of the season. Besides, the prices of United Provinces and Bihar ought to be uniform.

49. No satisfactory formula could possibly be devised on this question.

50. Duration of the crushing season for seven years is as follows:—

1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Days.	Days.	Days.	Days.	Days.	Days.	Days.
135	148	174	159	83	153	127

The variations in the past have been due to various reasons such as the condition of cane supply, dull prices in the market and sometimes due to private reasons, in which the overhauling and repairs were delayed, on occasions the mutual competitions were also the cause of the early close of the season.

Labour.

53. (*a*) & (*b*) We employ mostly the skilled labour in both the seasons.

54. We do not import any skilled labour.

55. No such replacement has ever taken place in our concern.

56. Pucca and katcha quarters have been provided for housing purposes, water supply and street lights are also provided. A dispensary is maintained to help in time of need.

57. No, only bagasses do not do in our case. We have to depend on firewood and coal as the figures given show:—

Season.	Coal.					Firewood.			
	Tons.	Cwt.	Rs.	A.	P.	Mds.	Rs.	A.	P.
1930-31 .	839	0	10,188	7	3	45,529	12,922	13	9
1931-32 .	*Nil*		6,936	1	9	...	14,177	1	9
1932-33 .	724	0	9,423	10	9	27,218	13,190	2	3
1933-34 .	722	0	10,345	4	0	88,134	23,369	2	6
1934-35 .	182	0	2,024	8	6	25,494	6,007	14	0
1935-36 .	...		...			...	...		
	Mds.	Srs.							
1936-37 .	7,853	20	3,509	14	0	99,028	21,997	5	6

By-products.

58. Excepting molasses, press cake, bagasse we have none.

	Season.	Produce of molasses.
		Mds.
59.	1933-34	61,366
	1934-35	42,165
	1935-36	74,988
	1936-37	54,582

60. The molasses is sold to our dealers at Barhaj Bazar who mostly supply to Bengal and Assam. The transport arrangement are boats and in only rare cases carts are also used from factory to steamer ghats.

Small quantity is also transported by rail to near about places.

61. We sell all our molasses.

62. No.

	Season.	Opening Balance.			Closing Balance.		
		Bags.	Mds.	Srs.	Bags.	Mds.	Srs.
64.	1931-32	65	162	20	39,705	99,262	20
	1932-33	No balance.			33,522	83,805	0
	1933-34	889	2,222	20	8,453	21,132	20
	1934-35	No balance.			20,792	51,980	0
	1935-36	Ditto.			53,267	133,547	0
	1936-37	19,855	49,837	20	28,116	70,420	0

65. We have a pucca godown for the storage of sugar, which can hold about 75,000 bags.

No, we have not increased the capacity, but we are contemplating to do so.

66. If the sugar is not sold before the monsoons the same is damaged. No. I about 10 per cent. and No. II about 30 per cent. due to atmospheric influence.

67. Damaged sugar is sold outright.

68. Excepting during the rainy seasons practically no complaints are received regarding the damage done to the sugar in the transit. No doubt cases of damage to sugar have been reported during the monsoons which are due to atmospheric influences.

70. Considerable inconvenience has been felt at times in obtaining adequate supply of wagons from the Bengal and North-Western Railway for the purpose of loading the sugar. Sometimes efforts have all failed and no wagons were forthcoming when required.

Capital account and overhead charges.

73. The book value of our property as it stood on the last complete year is:—

(i) & (ii) We have none.
(iii) Buildings Rs. 3,57,047-8-9.
(iv) Plant and Machinery Rs. 18,05,588.
(v) Other assets Rs. 31,821-5-6.

74. The depreciation between the last seven years has fluctuated between 122,000 to 125,134.

75. We have no balance in the reserve fund.

76. Ours is not a limited concern, therefore, this question does not apply.

77. The working capital in this factory has been provided through the banks, namely the Bank of Bihar, Ltd., Chapra, at different rates of interest varying during the last 6 to 7 years from 9 per cent. to 6 per cent. per ânnum. This year advances are arranged on stocks at 5 per cent. per annum (confidential).

78. We have no Managing Agents as it is not a Ltd. concern.

79. The higher the better, but should in no way be less than 15 per cent.

80. The forms duly filled are sent herewith—

(i) No extension of plant since 1930.
(ii) No installation of any machinery.
(iii) Reduction in salary and staff both.
(iv) Efforts have been made to reduce the consumption of the materials required for the manufacture of sugar.

82. There is no more room for any further reductions, but there is, however, room for improving in recovery datas, provided the circumstances and monetary conditions permit to work the plant with full efficiency.

Marketing.

83. The principal marketing centres in which we deal are Bombay, Calcutta, Karachi, Cawnpore, Allahabad, Benares and Jubbulpore.

84. (*a*) The usual arrangements in the sale of sugar between the manufacturers and the dealers are that the sugar is sold under Pukka contracts both as ready and forward delivery. Dealers are given 7 to 10 days time to remove the sold sugar. If desired necessary and agreed upon As. 8 to Re. 1 per bag is taken from the dealers as an earnest money deposit. The payment of the price of sugar is mostly arranged through the banks (delivery of document against cash payment).

(*b*) The dealers in their turn clear their stocks by selling in retail in smaller lots and mostly realising the price in cash.

85. The present Sugar Contract Form drafted by the Indian Sugar Mills Association is quite satisfactory, and we do not consider any further suggestion necessary.

86. Have no definite idea about it, but judging from what the people say, there has been a considerable difference in the wholesale prices at which the dealers purchase from the manufacturers. The consumers on the other hand have to pay at least Re. 1 or Rs. 2 per maund higher than the whole sale prices.

90. The Java sugar is mostly used in Europeanised hotels and restaurants, because Europeans or Europeanised Indians like bright colours. Still the high grade Indian sugar is replacing Java sugar.

93. Yes, the survey will be advantageous.

94. Surely it will be advantageous to the industry provided there is a whole-hearted co-operation, from all the sugar factories in India and no factory prefers the safeguarding of the individual interests to the interests of other member factories.

95. We are in favour of standardisation as it is an essential preliminary to the operations of a central sales organisation. Experience was not available when the standards were tentatively suggested and factories were not able to adopt them. We had therefore, to do business on the basis of samples of individual factories.

96. (*a*) & (*b*) No business has been done on the basis of standards.

105. The effect of the sugar excise duty has been both advantageous and disadvantageous; taking them one by one we may say:—

Advantageous.—(i) Further new factories have stopped coming into existence and thereby the future of the industry has been safeguarded.

(ii) It has brought new funds to the Government Budget.

Disadvantages.—(i) It has cut down the profit of the factories.

(ii) The curtailment of the profit has very badly told upon the employees' wages.

(iii) The additional excise duty of 1937 has made the situation still worst, leaving practically no profit in case of many factories.

(iv) It has forced the employers to reduce the number of labour and to cut down the wages to a greater extent.

106. Generally the molasses is sold to the dealers who mostly send that to Bengal and Assam side both by rail and by boat from Barhaj Bazar and other steamer ghats.

108. Had there been no protection, the import of foreign sugar would have given a very serious blow to Indian industry.

109. Looking to the present market rates and the levy of excise duty on the margin of profits, it is absolutely essential that the same rates may be allowed to continue. Any decrease in the rates will harm the industry.

Cawnpore Sugar Works, Ltd., (Gauri Factory).

REPLIES TO TARIFF BOARD GENERAL QUESTIONNAIRE 1937.

Production of sugar.

1. This factory began the manufacture of sugar in the year 1916. Capacity of the factory is 750 tons.

	Season.	Total Maunds. Sugar.	No. 1 Sugar. Mds.	No. 2 Sugar. Mds.	No. 3 Sugar. Mds.
2.	1930-31	79,410	29,700	49,710	...
	1931-32	102,068	47,300	54,768	...
	1932-33	104,808	48,125	39,448	17,235
	1933-34	124,253	68,868	50,861	4,524
	1934-35	101,773	101,773	...	...
	1935-36	133,820	133,820	...	...
	1936-37	234,140	234,140	...	...

3. (*a*) The factory is advantageously situated as regards cane supplies, but not of the best quality cane as compared with the Bombay Presidency and the Deccan, but with regard to limestone the freight is very high amounting to approximately seven times the value of the stone. The same applies to coal and other stores but to a lesser degree.

(*b*) Rail, road and other communications are satisfactory.

(*c*) Labour is adequate.

4. *Double Sulphitation.*—The advantages and disadvantages of the respective processes are as follows:—

Sulphitation.—Lower capital cost, lower operative cost, more careful control required (less "foolproof") lower grade of sugar produced which is more susceptible to damage in unfavourable climatic conditions, lower yield varying from 2 per cent. with high purity juices to 4 per cent. with low purity juices.

Carbonation.—Higher capital cost, higher operative cost, easier control (more "foolproof") superior sugar made, less liable to deterioration in the monsoon. Higher yield, from 2 per cent. to 4 per cent, dependent on purity of juices.

The additional capital cost for a factory milling 25,000 maunds per day, is about £3,500 e.r.w. The critical factor in deciding the process is cost of limestone as laid down at factory; operative costs are essentially those of stone and coke as against lime and sulphur.

Labour difference is unsubstantial.

5. The following is a list showing the changes in the lay-out of the factory, extensions of plant and replacement of machinery made since 1930, with costs thereof:—

	Rs.	A.	P.	Rs.	A.	P.
1930—						
Additional Coils for B. Pan	4,602	2	5			
Filter Presses	2,450	0	0			
Cane Knives and Cane Carrier Extension	11,088	2	10			
Tramway Track	1,164	5	9			
M. G. Condemned Wagons	1,680	0	0			
New Weighbridges	7,252	8	0			
				28,237	3	0
1931—						
C. O. 2 Recorder	1,075	10	0			
New Molasses Vat	2,748	4	3			
				3,823	14	3
1932—						
New Sulphur Burner	1,250	0	0			
Steam Pump for pumping Scum Juice through Filter Presses	1,382	6	6			
New Cart Weighbridges	2,966	6	6			
				5,598	13	0
1933—						
Installation of 2 Defecators	2,946	15	5			
New Godown	11,492	1	4			
Additional Air Compressor	2,269	6	7			
New Cane Cart Line	14,297	9	7			
Cane Cart Weighbridges	5,150	0	0			
Weighing Machine	789	13	0			
M. G. Condemned Wagons	2,380	0	0			
				39,325	13	11
1934—						
New Sugar Crusher	3,289	2	10			
Electrolyser	844	4	3			
Cane Shredder	354	0	0			
Tram New Trollies	6,102	9	0			
Meter Gauge Condemned Wagons	1,931	3	2			
				12,521	3	3
Carried over				89,506	15	5

	Rs.	A.	P.	Rs.	A.	P.
Brought forward .				89,506	15	5
1935—						
New Sugar House	850	11	1			
125 K. W. Generating Set . .	16,208	13	3			
Filter Presses	16,022	12	1			
Juice Heater Pump	4,244	6	5			
Centrifugal and Conveyor . .	15,883	3	4			
50 B. H. P. Motor . . .	2,232	0	9			
New Crystallisers	15,380	1	9			
Syrup Storage Tank . . .	1,418	14	7			
Sugar Elevator and Seed Mixer .	2,143	0	7			
Screw Conveyor	1,300	14	9			
New Vacuum Pan and Condenser .	32,483	12	0			
Molasses Pump	3,278	6	11			
Ram Belt Driven Pump . .	1,794	1	2			
Re-erection of Machine in Sugar House	10,397	9	8			
Dismantling and Re-erection of Old Pan	2,364	0	10			
Re-arrangement of Defecators .	913	5	9			
125 K. W. Generating Set . .	526	1	0			
				1,27,442	3	11
1936—						
New Lathe	2,429	12	3			
Clerks' Quarters	3,170	15	2			
Circulating Water Drain . .	1,452	6	3			
Erection of Staging in Clarification House	3,109	9	11			
M. G. Condemned undercarriages	4,634	7	5			
Sugar Grader	130	6	2			
Sulphur Burner	17,074	9	2			
Melting Tank	1,387	13	4			
Pan House Counter Shafting .	560	0	0			
Syrup Storage Tank . . .	2,028	15	8			
Re-erection of Lancashire Boilers .	828	10	2			
Factory Electric Wiring . .	6,658	4	0			
Weighbridges	1,700	0	0			
Tube Well	5,725	0	6			
				50,890	14	0
Carried over . .				2,67,840	1	4

	Rs.	A.	P.	Rs.	A.	P.
Brought forward .				2,67,840	1	4
1937—						
Sugar Godowns	12,027	15	1			
Factory Compound and Siding .	5,821	9	0			
Stores, Engineer's Office and Godown	2,680	15	6			
Mill House	19,417	6	2			
Erection of Filter Presses . .	32,688	5	3			
,, ,, Juice Heaters . .	8,658	12	5			
,, ,, Vacuum Pan . .	23,721	11	1			
,, ,, Centrifugal Machine	18,995	3	10			
,, ,, Generating Set . .	36,380	1	3			
,, ,, Babcock Boilers .	1,69,909	10	6			
Cane Carrier	12,549	9	1			
Liming Tank	3,233	0	0			
Mills	1,70,036	1	7			
Extension to Factory Buildings, Clarification and Press House .	20,888	6	5			
Extension to Boiler House . .	16,470	9	5			
,, ,, Pan House . .	2,729	0	9			
Chimney and Smut Chambers .	20,893	8	6			
Workshop Laboratory and Pump House	4,903	3	1			
Erection of Staging in Pan House	2,760	4	7			
Injection Water Pump . . .	7,612	8	2			
Erection of High Speed Dry Air Pump	9,009	4	10			
Re-erection of 8 Existing Crystallizers and 1 Seed Mixer . .	1,553	13	11			
Cur/20 Erection of 30″ Centrifugals	15,076	4	4			
Erection of Water Service Tank .	1,187	6	3			
Erection of Water Tower . .	3,415	0	7			
Re-erection of 3 Aspinal Pans .	813	3	8			
Tipping Wagons	764	1	6			
Erection of Lime Shafting . .	1,395	4	9			
,, ,, 9 Subsiders . .	4,120	2	5			
,, ,, Sugar Drier . .	6,783	5	3			
Hyflo Mixing Tanks . . .	1,861	15	11			
Magma Pump	3,144	9	4			
Cables and Transmission Line .	839	11	8			
60′ × 90′ Godown	8,702	12	11			
Extension to Godown No. 3 . .	4,177	2	10			
50′ Extension to Godown No. 4 .	4,713	3	6			
				6,59,936	5	4
GRAND TOTAL . .				9,27,775	6	8

6. With conditions as they are at present, we do not contemplate extensions, but should there be an improvement we may consider installing further equipment.

7. (*a*) The main factors which determine the size of the factory are the amounts of cane available for milling and the transport facilities.

(*b*) The capacity of the factory should not be less than 400 tons per day.

8. Most of the equipment in sugar factories can now be obtained in India, but non-ferrous metals and tubes, heavy shafts for rollers, etc., boilers and special pumps and engines have to be imported.

9. (i) Have not seen much of their work yet except tabulated data which they have received from the various sugar factories.

(ii) The Government do not inform us of the promulgated cane rates. These should be advised at least two days before they are due to come into force.

Raw Materials.

10. No.

12. (*a*) 2 acres.

(*b*) We buy cane seed from the Government Farm and distribute it to the Ryots at Government rate.

14. (*a*) During the past seven years the quantity of cane available in this district has increased considerably. It is impossible for us to give any definite figures, but such factors as the increase in the number of factories in this district, and the enlargement of these factories including that of our own in the off-season of 1936, and the increase in our own crushing capacity as set out in answer to Question No. 21, will give a very good idea of the rapid increase in the quantity of cane available.

(*b*) The quality of the cane has been subject to seasonal variation *vide* reply to Question No. 80 (Form iii).

15. We very seldom have damage from frost but from disease and insect pests the damage is very considerable. During the month of February this season a detailed survey was carried out to determine to what extent th cane was infested with disease and this worked out to 17·3 per cent. on the average causing a sugar loss of 1,157 maunds for the month or Rs. 6,942 monthly.

16. As the Board is aware the Gorakhpur District, from the point of view of the number of factories, is very congested and it is difficult to say whether we are "assured of a sufficient supply of sugarcane", but for the past two years our cane supplies have been all cart cane of a very high quality, the staple variety in this dehat being C.O. 213, but there are very small quantities of C.O. 285 and 331. The field yield is approximately 250—300 maunds per acre.

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In this connection we would refer you to the Sucrose content figures given in answer to Question No. 80 (Form iii).*

17. The supply of cane and the price at which it can be obtained has been very largely influenced by the competition of other factories. Some 9 miles to our west there is a very big factory at Saraya, 5 miles to our east there is a factory at Baitalpur and last season there were two factories working at Deoria which is about 4 miles east of Baitalpur. To our north there are numerous factories and the north-east of Gorakhpur district, thus it can be imagined that the competition is very great. In the past our difficulties in obtaining full supplies of cane were not so great as we were of a very small crushing capacity, and during the season just concluded the crop was abnormal and we had no difficulty in obtaining our full quota of supplies, but in future when the crop reverts to normal the question of obtaining full supplies without resorting to Railway cane is going to exercise those responsible very considerably. In the past we have always paid higher rates for cane at Gauri in order to complete with our neighbouring factories whose policy has been to pay as much as one anna above Government rate, ever since this rate has been enforced.

18. The only variation in this dehat has been in the steady increase of plantings.

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* Not printed.

19. Requirements is an elastic term. Regulation rather than restriction is indicated. We have been able, by extending the duration of the season and by additions to plant to take off practically all the cane which was offering in the areas serving our factory. We consider that control of the area under cane in Northern India is desirable, but coupled with a reduced production of sugar by white sugar factories, so that the quantity of cane available for manufacture conforms to a reduced output from the factories, so as to bring consumption and production into line.

While expressing this opinion we realise the great difficulty in co-ordinating the area to be put under cane with factory production owing to the millions of independent growers involved and the variations in yield per acre as influenced by seasonal conditions and the uncertainty as to the ultimate utilization, *e.g.*, gur or white sugar or eaten in the raw state.

20. We give below a specimen cost of cultivating one acre of sugarcane:—

	Rs.	A.	P.
Cost of 40 maunds of cane seed at Government rate of Annas 5 per maund	12	8	0
Cost of 4 irrigations (5 men at Annas 2 per man per day for 6 days, per irrigation)	15	0	0
Hoeing charges (10 times 12 men at Annas 2 per man per day for each hoeing)	15	0	0
Cost of carting 30 carts of Farm Yard Manure with 2 men per cart making 5 trips per day for 6 days at Annas 2 per day	1	8	0
Total .	44	0	0

No mention has been made for any charges for ploughing and Hengering, as in this district nearly all cultivators own their own ploughs and Hengas. Assuming the acre were to cut out at 300 maunds and assuming a price of Annas 5 was paid for this cane, this would give the cultivator a sum of Rs. 93-12 for his cane with a profit of Rs. 49-12.

21. One, and possibly the greatest, objection which the ryot has to the cultivation of cane is the duration of time which it takes between the date when he has to reserve land for the crop till he receives money for its proceeds. This is not less than eighteen months unless he has cultivated an early ripening variety of cane. To partly overcome this difficulty we make a practice of advancing money to the ryot.

Then there are the difficulties of harvesting the crop—the diversion of labour from other agricultural pursuits and the loss of bullocks' time from farm work involved in the transport of cane. It is these difficulties which have so encouraged the practice of ratooning cane which even from the point of view of perpetuating disease should be discouraged if not prohibited by law.

With a view to popularising the cultivation of cane we have the following sugestions to make:—

1. The supply of sound seed cane of approved varieties. It is notorious that if left to his own devices the ryot will plant from the worst portion of his crop. This is where the Agricultural Department can do most valuable work.
2. The encouragement to factories to acquire land for the establishment of seed farms, from which good seed cane could be distributed. Government could assist in the acquisition of land for this purpose by suitable legislation.
3. Intensive education of the ryot in the best agricultural practice for the cultivation of cane, including the intelligent use of suitable fertilizers. The system of education to be that best suited to local conditions.

4. An examination of the prospects from irrigation by tube wells and canals might be valuable.
5. Every possible encouragement to be given to factories to lay down local tramways for the carriage of cane, so reducing the strain on the ryots resources in providing bullock transport.
6. Such terminal organisation at factories which will reduce as much as possible the time lost in keeping carts waiting to unload. We favour a system which ensures a cart being able to transfer its load as soon as possible after its arrival at the factory or other delivery station.
7. The provision of good road communications and we should particularly stress the maintenance of good bullock cart tracks.
8. We would advocate that Government should prohibit the weighment of cane during the hours of darkness except at factory or tramway depots. It is our belief that when lighting facilities are very inadequate, as they generally are, the weighment of cane at railway stations tends to lead to abuses, however zealous the inspecting staff may be. If there were proper organisation there should be no hardship in restricting weighments to daylight hours.
9. To ensure better control of cane deliveries at railway stations and factories the system of issuing passes for carts which we employ should be made compulsory. This by reducing the time carts are kept waiting would reduce transport charges where ryots employ professional carters for the carriage of their cane and save sugar losses due to stale cane. We also suggest that carts should be licensed.

22. (*a*) No other views than those of Tariff Board.

(*b*) We have insistently advocated the introduction of a system of "zones" for sugar factories. If this had formed a part of the legislation which was introduced at the time Government decided to grant protection to the sugar industry many of the difficulties with which the manufacturing side of the industry is now confronted would never have arisen. We fear that in some areas it is now too late for any effective legislative action to be taken, but there do exist areas where conditions make it possible for groups of factories to come to a mutual agreement for the equitable distribution of local supplies of cane, and in this Government might be of assistance in an advisory capacity.

23. Our policy is, and has always been, to do everything possible to develop local supplies of cane, by means of loans in cash at reasonable rates of interest, the supply of sound seed, manures and the provision of rubber-tyred carts on the hire-purchase system. It will be naturally realised, however, that if a factory's local supplies of cane are liable to be taken by outside factories, there is obviously less encouragement to the home factory to undertake development measures.

24. We are in favour of the regulation of sugar production by means of quotas, and also the licensing of new factories, including extensions to those at present in existence.

Until there is a definite and material increase in domestic consumption, India's production of sugar may now be accepted as having reached saturation point, and to avoid the evils of over-production we consider that Government should at once take powers to limit the quantity of sugar which may be manufactured under a system of quotas. This remedy will not, however, be of any avail unless, linked thereto, the establishment of additional factories is prohibited and any extensions to the plant of existing factories, except for the purpose of increasing efficiency or improving the quality of the product.

This question becomes highly complicated by the position of Indian States towards the erection of their own factories and the export of sugar thus made into British India with possible non-reciprocity, but even if a satisfactory solution to this difficulty cannot in all cases be found, our opinion remains unaltered, that the regulation of sugar production in British India in the manner suggested is essential to the well-being of the Industry and to the many interests dependent upon it.

In this connection, we would emphasise the necessity of a decision being reached, if possible, before the end of the current year so that the cane-planting programme during the ensuing winter can be worked out in relation to the sugar requirements of the country for the Crushing Season of 1938-39.

25. Our cane supplies from season 1930-31 are as follows:—

Season.	Gate Cane.		Rail Cane.		Tram.		Total.	
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.
1930-31 . .	531,727	10	201,458	0	121,359	0	854,544	10
1931-32 . .	948,583	20	117,925	30	109,342	20	1,175,851	30
1932-33 . .	997,525	10	27,159	30	211,910	0	1,236,595	0
1933-34 . .	1,073,245	30	61,293	0	146,894	0	1,281,432	30
1934-35 . .	980,857	20	19,604	30	52,158	0	1,052,620	10
1935-36 . .	1,296,465	30	...		...		1,296,465	30
1936-37 . .	2,214,418	10	...		29,637	10	2,244,055	20

Gate cane has increased due to increased plantings and propaganda.

26. For the past two seasons our cane supplies have been transported entirely by bullock carts. The average weight of cane carried by country carts is 15 maunds per cart. During the Season 1934-35, we introduced 10 carts built to the Pusa Specification fitted with the Rubber Co. (India), Ltd.'s bullock cart equipment. These were all sold to cane growers. For Season 1935-36 we increased the fleet to 74 carts and for the Season 1936-37 the fleet was increased to 177 carts. These carts are hired out for the season for a sum of Rs. 30 per cart to cane growers or whenever possible, they are sold for Rs. 240 each. The purchaser either buys them outright or on the instalment system. These carts have proved immensely popular with the cultivators. We carry out the servicing of the entire fleet. The weight of cane brought by carts averages about 60 maunds per cart.

27. Apart from the main Gorakhpur-Kasia road which is pucca, and some 13 miles north of the Factory, all roads in this dehat are kutcha and whilst they are far from good they can be considered adequate.

28. Cane is brought to the factory by carts from all distances up to 25 miles. The average time taken between cane cutting and delivery at the factory is about 12 hours. During transport the country carts are covered at the back and top of the cane with a thick layer of trash, and at our various out-station weigh-bridges *en route* to the factory, these leaves are sprinkled with water. To each rubber-tyred cart 2 " Pals " are issued which have to be spread over the cane and also kept damp. Any cart that is not covered either by leaves or by " Pals " is specially analysed and the grower concerned is warned that on repetition of the offence the cart in question will be stopped for one day.

29. The average cost of cartage is one anna per maund. Most of the cane growers in this area own their own carts. If a grower wants a hired cart to bring in his own cane, he merely pays the cartage.

30. No.

31. The system of cane control at Gauri that has been enforced for the past three seasons is as follows:—

> The whole dehat is divided up into village circles. Over each circle a big Zamindar is appointed as Controller. Before the season begins each Controller is told the amount of his control (so many thousand maunds or whatever it may be). This figure is decided by the Cane Office at the conclusion of its various surveys. The control is made up

of the Zamindar's own cultivation, of his tenantry and of other growers who have made arrangements with him to supply their cane in his control; but no Controller unless he owns land there or has advanced money there, may encroach upon another Controller's circle of villages. Thus before the season starts the whole dehat is divided up into controls of various maundages. We know the number of working days in the season and therefore we know the amount of cane each Controller will supply daily. We limit our nett weight of cane on a country cart to 15 maunds (approximate weight of cart 8 maunds and gross weight 23 maunds). The rubber-tyred hired carts are limited to 50 maunds of cane (approximate weight of cart 11 maunds and gross weight 61 maunds). The rubber-tyred privately owned carts are unlimited. Thus we are able to work out the number of carts and the maundages that will arrive at the factory daily. In the event of a breakdown in the mill, or low crushes for some other reason, we can control the quantity of cane arriving to meet our requirements at very short notice.

In the dehat there are seven out-station weighbridges the nearest being five miles from the factory. Thus our supplies are divided into Gate cane and out-station cane. The Controllers within 5 miles radius of the factory bring their cane straight to the factory. The Controllers outside this radius first take their cane to the local out-station weighbridge where it is weighed, thus they themselves can know how much cane they have in fact sent to the factory. In this manner we are able to maintain a uniform supply of cane to meet our daily requirements from the whole of the dehat. The normal period of detention of a cart at the factory is about three hours. It must be understood that this system for all practical purposes was first started some three seasons ago and is being improved and added to every season. At the factory gate there are three Gross weighbridges—one for country carts coming to the east gate, one for country carts coming to the west gate, and a special 5-ton weighbridge for rubber-tyred carts only. There are also 3 tare weighbridges—one for gate east, one for gate west and one for rubber-tyred carts. Each Controller knows which gate he has to come to whether east or west, and leading to the Gross weighbridges there is a system of railed-in cart lines, and each Controller has his special line in which his carts must come. In this manner there is no seething mass of carts jammed outside the factory gates. The carters are marshalled into their respective cart lines. They proceed slowly but steadily on to the gross weighbridge, they are weighed, then they either proceed to either of our two carriers, or are loaded on to Mundas in the cane yard; they then proceed by the special tare cart line to the tare weighbridge, and so out of the cart line when they can come back and cash their cane receipts; all of which takes place within approximately 3 hours.

32. For the past two seasons we have taken no rail cane and we hope that the supplies in the dehat will meet our requirements in future without having to resort to the railway. Previous to 1935-36 we obtained cane from the Railway Stations given below:—

	Miles.		Miles.
1. Nunkhar	18	8. Sasa Musa . . .	101
2. Campiarganj . . .	42	9. Thawe	107
3. Pharenda	47	10. Jalalpur	95
4. Brijmanganj . . .	55	11. Tahsil Deoria . .	10
5. Siswa Bazaar . . .	62	12. Chhitauni . . .	77
6. Khadda	71	13. Chhitauni Ghat . .	81
7. Munderwa . . .	52	14. Rawatganj . . .	37

33. There is a scale of charges for each type of wagon per mile with a minimum rate per type of wagon and same is given herewith:—

Type of Wagon.	Rate per mile.	Minimum rate per type of wagon.
	Rs. A. P.	Rs. A. P.
Open cane wagons, 6, 8 and 10 tons 14 ft.	0 2 6	5 0 0
Open cane wagons 10 tons 16 ft. and 11 tons 15 ft. . .	0 4 3	7 0 0
Cage trucks 10 tons . . .	0 4 3	7 0 0
Cage trucks 12 tons . . .	0 4 9	8 0 0
Covered wagons	0 3 6	6 0 0

These rates have been in force for several years now and are higher than they were eight years ago but the present flat rate basis is preferable to a maundage basis as cane being a bulky article does not fill wagons to their axle carrying capacity, and to introduce a maundage rate would, we feel, inevitably increase the freight costs as the railway would calculate the contents of a wagon on the carrying capacity rather than its actual load, which is considerably less.

34. See Question 3A.

35. We have a small tramway which runs for 2½ miles south-west of the factory to the River Majhana. The transportation of this cane costs the Company 2 pies per maund of cane transported. No transport charges are paid by the grower.

36. In this dehat where we have no estates and where we have a large fleet of rubber-tyred carts, we see no advantage in a tramway system.

37. The loss through dryage and deterioration between cutting and milling varies according to the variety of cane but the loss is definitely serious in the months of March, April and May. The results of numerous tests carried out during these months in Season 1932-33 indicated that the loss in weight through dryage amounted to 2·5 per cent. after 24 hours, 5 per cent. after 48 hours and 7 per cent. after 72 hours. Apart from the loss in weight, the purity of the juice in the cane deteriorated by one unit after 24 hours, five units after 48 hours and nine units after 72 hours. A detailed account of dryage and deterioration of cane varieties in Upper India is given in the 1933 issue of the International Sugar Journal.

38. (*a*) We have given an account of our method of cane supply in answer to Question No. 31 but although the supply of cane is in the hands of the various Controllers the actual grower or his authorised agent is paid the purchase price of the cane.

(*b*) We have no Contractors or Agents. We are definitely opposed to the employment of Contractors unless they possess market influence and have a financial stake in the area in which they operate.

39. Whenever a particular cultivator is in need of money for the improvement of his cane cultivation he is granted a loan. Similarly, we arrange for seed and fertilizers for our cultivators. We also have a fund from which sums of money are advanced to controllers for the purchase of bullocks.

40. The actual purchase of cane is made direct from the grower or his authorised agent, but we pay a commission to Controllers for the work they do in controlling the supplies of cane, and in keeping their cane and their tenants' cane for the factory and not allowing it to go elsewhere, as follows:—

Rate of Commission.

From 20,000 maunds to 30,000 maunds at 2 pies per maund.
From 30,001 maunds to 40,000 maunds at 3 pies per maund.
From 40,000 maunds to 50,000 maunds at 4 pies per maund.
From 50,001 maunds and over at 5 pies per maund.

The commission is paid to them only if they complete the amount of their control or if they do not complete the full amount of their control, if it was through no fault of their own. Incidently each Controller has to deposit with the Cane Office before the commencement of the season Rs. 100 for every 10,000 maunds of his control as an earnest of his good faith.

41. No.

42. Weighments are made at the three factory gate Gross weighbridges; as soon as the cane is weighed it is dropped on to either of our two carriers or loaded on to Mundas in the Cane Yard; the cart is immediately tared and the carter can immediately cash his cane receipt. At this factory the carters are encouraged to cash their cane receipts quickly. Some of the bigger Zamindars who live at a distance from the factory often prefer to collect their cane receipts and cash them altogether at the end of the season.

43. We give below the average prices for which we have purchased cane for the past seven years:—

	Annas per maund.
Season 1930-31	5·64
,, 1931-32	6·15
,, 1932-33	5·96
,, 1933-34	5·22
,, 1934-35	6·30
,, 1935-36	5·90
,, 1936-37	4·29

In the normal season prices start low (about Government rate) and tend to rise as the season progresses and as much as 8 or 9 annas per maund have been paid in April in some parts of the Gorakhpur District.

44. The price is that fixed by Government which varies directly with the price of sugar.

45. In this district we do not think the price of sugarcane is in any way affected by that of Gur or Khandsari sugar.

46. See No. 45.

47. With the exception of the season just concluded we have always paid in excess of the Government rate as follows:—

Season 1934-35.

Average Government rate	5 annas per maund.
,, Factory rate	6·30 annas per maund.

Season 1935-36.

Average Government rate	5 annas per maund.
,, Factory rate	5·90 annas per maund.

The reason being the intensive competition which exists between the factories in this district. We have always commenced by paying the Government minimum but have been forced to pay higher rates owing to the neighbouring factories raising the price.

48. Under present conditions, the basis is not satisfactory and calculations should be based more on the rates obtained for sugar by average factories than on the special rates obtained by a few factories employing more expensive processes.

We would also suggest that the 8-anna margin which is at present used in arriving at a scale be reduced to enable the cane rate to be adjusted more frequently and equitably.

We may have further suggestions to make at an early date.

49. Once a new variety of cane has been introduced into the dehat, there should be no need for the payment of bonuses. In support of this statement we give two reasons: (i) The new canes which are now being released are all capable of producing good yields per acre, and once the Assamis have tried them there is no reason why they should not consider them as good as Co. 210, 213 and hemja, (ii) when the Assamis have found that the new varieties give them a fair yield the advantages of knowing when they plant a field, in which month it will be cut, is so great that they will certainly realise their value in a very short time. Bonuses, therefore, may be required to introduce a new cane into the agricultural world which is always conservative but they should not be necessary once that idea has taken a hold.

50. The duration of the crop for the past seven season is given under Question No. 80. The variations in the duration can be attributed to available supplies of raw material and the economical operating purity of the cane supplies.

Until such time as early and late ripening varieties have been established, it is our opinion that the economic duration of a cane season can be given as from 1st December to 15th April.

51. It is possible that by the introduction of well established early and late varieties of cane to extend the crushing season in North Bihar and Eastern United Provinces from, say, 1st November and 31st May or a seven month operating period.

52. We have had considerable assistance from the Imperial Council of Agricultural Research and the Agricultural Departments of our Local Government. We feel, however, that their efforts are not sufficiently co-ordinated and that therefore they fail to give the help which we really need.

It occurs to us that the staff of these Departments should be more mobile. The demonstrations and help which are required by us should be available on the spot, and we would suggest that a motor van equipped with cinematograph and loud speaker equipment would meet a long felt want.

Propaganda could be carried on in this manner from village to village in the neighbourhood of established factories and the ryot could see demonstrations and hear actual explanations in his own language of all problems attached to the growing of his crops.

	Seasonal Labour.		Silent Season.
53.	1. Skilled . .	195	Total 170 of which about 75 per cent. is Skilled labour.
	2. Unskilled . .	410	

54. No skilled labour is imported from abroad or other parts of India.

55. All are Indian labour.

56. Quarters are provided and free medical attention. We contribute to Local Schools.

57. We have had to supplement as follows:—

Year.	Coal.	Wood.
	Rs. A. P.	Rs. A. P.
1930-31	1,907 15 0	121 4 0
1931-32	1,545 4 0	55 4 0
1932-33	414 5 0	3 12 0
1933-34	...	57 0 0
1934-35	8,759 10 0	514 0 0
1935-36	14,223 9 0	3,908 6 0
1936-37	4,613 11 4	7,287 5 6

We do not bale bagasse.

58. Molasses, Bagasse and Press Mud.

Season.	Maunds Molasses Produced.	Average Selling Price.		
		Rs.	A.	P.
59. 1930-31	36,169	2	6	0
1931-32	50,555	0	15	0
1932-33	47,670	0	4	10·3
1933-34	42,725	Burnt		
1934-35	30,492	0	1	0
1935-36	38,125	0	3	6
1936-37	62,840	0	1	0

The general fall in price is due to supply being much above demand.

60. We consider railway facilities inadequate. Railway freight rates are not known to us as molasses are despatched by the purchasers on their own account.

61. Sulphus waste molasses are destroyed in a Brooks Molasses Furnace or utilised for steam generation. For steam generation purposes, molasses are not very satisfactory on account of the large deposit of ash of a corrosive nature in boiler tubes, etc.

It is suggested that molasses may be utilised for the production of Power Alcohol, Acetic Acid, Ether, Chloroform, Glycerine, Acetone, Citric Acid, Butanol, Carbon Dioxide for dry ice and Yeast.

62. At present there is no outlet for surplus bagasse, small quantities only being taken by the cane suppliers as fuel.

Bagasse could be manufactured into paper or boards but the initial cost of the manufacturing plant will be high.

63. Sulphitation and well weathered carbonation press mud can be utilised as a manure.

64 Stocks of sugar at the beginning and end of each crushing season since 1930 are given below:—

	Beginning.			End.		
	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.
1930-31	*Nil.*			42,525	33	8
1931-32	*Nil.*			39,012	19	0
1932-33	16	33	8	46,324	6	8
1933-34	2,460	0	0	21,727	20	0
1934-35	7	2	0	57,767	20	0
1935-36	8	4	0	78,751	16	4
1936-37	5,709	0	2	120,616	2	0

65. Stored in Godowns, capacities of which are as follows:—

No. 1 Godown	4,830 bags.
No. 2 ,,	6,330 ,,
No. 3 ,,	8,830 ,,
No. 4 ,,	11,500 ,,
No. 5 ,,	13,650 ,,
No. 6 ,,	11,400 ,,

Yes, storage capacities have been increased recently, and we are experimenting with various stacking media.

66. The extent to which sugar may deteriorate is chiefly dependent upon the period of storage and weather conditions. Apart from the period of storage and weather conditions factors influencing the keeping quality of sugar are numerous but it may be stated that the construction and condition of the godowns in which sugar is stored, temperature at which the sugar is bagged, packing, stacking and stacking medium employed together with sugar quality all play a part in the keeping quality of sugar.

67. Damaged sugar is usually remelted and reprocessed.

68. The production of sugar of greater purity of bold and regular crystal free from dust and broken grain, will undoubtedly improve the keeping quality.

69. The damage of sugar in transit from the factory can be attributed to the type of rail wagon or flat used and weather conditions during transhipment.

70. No.

71. Water-tight wagons should be provided for sugar traffic. These wagons may be used in grain or cereals transportation but not for coal, oil or any other material which may thus spoil the floors of the wagons for sugar transport.

72. Our sugars are sold on an f.o.r. factory basis, the price being one for important markets. We have no record of secondhand prices for our product at the ports and upcountry, but give below the actual f.o.r. prices obtained during the past 7 years. We also give the freight from the factory to the ports and certain upcountry markets:—

F.o.r. Prices.

Season.	I Sugar.			II Sugar.			Both Sugars.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1930-31	9	1	7·8	7	15	11·3	8	6	6·9
1931-32	9	12	10·6	9	4	0·1	9	8	1·4
1932-33	9	3	6·6	8	9	9·2	8	15	2·5
1933-34	8	2	6·8	7	4	4·1	7	12	6·2
1934-35	8	5	10	...			8	5	10
1935-36	8	3	10·4	5 (Rori)	8	0	8	3	8·7
1936-37	6	5	1·5				6	5	1·5

Freights.

Station.	Rail Freight.			Rail & Steamer Freight.		
	Rs.	A.	P.	Rs.	A.	P.
Allahabad	0	7	2	...		
Cawnpore	0	8	4	...		
Lucknow City . .	0	7	8	...		
Calcutta	0	13	4	0	14	6
Bombay	1	0	0	0	13	6
Madras	1	0	6	0	13	6
Karachi	1	1	0	0	13	6

73. We enclose copies of the Balance Sheets.

74. We give below amounts of depreciation written off by the Company from 1930, also the statutory amount allowed under the Income Tax Act,

1932. Depreciation is usually a round sum based, as nearly as possible, on the statutory scale—

	Written off.	Statutory.
	Rs.	Rs.
1930	...	2,49,444
1931	2,00,000	2,52,784
1932	3,25,000	2,74,216
1933	3,25,000	2,83,938
1934	3,50,000	2,97,598
1935	3,00,000	2,60,275
1936	3,00,000	2,82,610

Of the amount provided in 1936 Rs. 2,00,000 was transferred from Reserve Account.

The figures given are for Cawnpore Sugar Works, Ltd., of which this unit forms a part.

75. We give below the amounts set aside for Reserve Fund:—

	Rs.
30th June.	
1931	1,38,087
1932	1,00,000
1933	48,640

The above figures have reference to Cawnpore Sugar Works, Ltd., of which this unit forms a part.

76. We give below details showing amounts distributed as dividends by the Company—

30th June.		Rate. Per cent.	Amount. Rs.
1930	P.	8	80,000
	O.	7½	1,12,500
1931	P.	8	80,000
	O.	20	3,00,000
1932	P.	8	80,000
	O.	35	5,25,000
1933	P.	8	80,000
	O.	30	4,50,000
1934	P.	8	80,000
	O.	30	4,50,000
1935	P.	8	80,000
	O.	25	3,75,000
1936	P.	8	80,000
	O.	10	1,50,000

P. = Preference; O. = Ordinary.

These figures refer to Cawnpore Sugar Works, Ltd., of which this unit forms a part.

77. The Bank allows overdrafts under agreement for cash credit, by which stocks, etc., are pledged. The rate at which the Company, of which this unit forms a part, is able to borrow is, bank rate subject to a maximum of 8 per cent. and a minimum of 3 per cent.

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78. Head Office expenses and Managing Agents' commission amount to Rs. 18,427 for the year 1936. Managing Agents' commission is calculated at 7½ per cent. on the net profits before providing depreciation and income-tax.

79. Considering the hazardous nature of the enterprise the risks of drought, floods, pests, the machinations of buyers, the Excise Duty, the costs of maintenance, the demands of taxation, a balance of 10 per cent. at credit of revenue, after allocations to depreciation and reserve accounts, is not excessive.

80. Forms 1, 2 and 3 referred to are attached.* As regards Forms 1 and 2, the figures in respect of 1936-37 cannot be submitted as our financial year is not yet closed.

81. Owing to the complicated nature of the returns called for we are unable to submit the information in the allotted time, and we will do so as soon as the returns are completed.

82. Every possible economy has been effected in the works and efficiency brought to a high standard, comparing favourably with other sugar producing countries, that there is very little margin for further reductions in the works and we must now look to a higher sucrose content and for further reductions in cost of cane.

83. Calcutta.

84. We are unable to give particulars of the relations between dealers and retailers, but so far as we are concerned, we are put into touch with our dealers by our brokers. Up to this year we had several brokers working on a commission basis from 8 to 12 annas per Rs. 100. These brokers would make us offers, which, if accepted, would be confirmed by contract between ourselves and the dealers, a deposit being required as Earnest Money, which the dealers paid; interest was allowed on this deposit. During the current season, we have obtained Sole Distributors for the whole of India—Messrs. Ralli Bros., Ltd. While the system of their making us offers on behalf of dealers still continues to a lesser extent, the chief method of doing business is for us to give them option for a fixed period on quantities of each grade of sugar which we wish to dispose of, fixing the minimum price at which they can sell. In this case also, the arrangement between them and ourselves is by agreement, the actual contract, which is supplementary to the agreement being entered into primarily between them and their dealers.

85. The new Indian Sugar Mills Association Contract Form is satisfactory except as regards clause 8. The responsibility for the condition of sugar *sold f.o.r. factory* should be more clearly defined, as falling upon the buyer. Unless the buyer takes delivery at factory it is impossible to prove in what condition the sugar was despatched, and whether damage took place while in the hands of the carrier.

86. The figures with regard to this question can be obtained from dealers, importers, and brokers. We ourselves are unable to give accurate figures, especially as most of our business in the past has been done through dealers in the Cawnpore market, and on an f.o.r. factory basis.

87. Variations in this case will occur when comparing wholesale forward business with ready petty sales, but for spot business there is little fluctuation between wholesale and retail prices, though the difference between these actually varies according to quantity, up to approximately 4 annas per maund.

We have taken the retail prices as covering lots of 5 to 25 bags, which are not necessarily in shopkeepers hands, there possibly being a further difference in the actual shop price to the consumer.

88. We have very little information as to the storage arrangements made by dealers, but from our experience we understand that they are disinclined to keep stocks, preferring to utilise factory storage space, even to the extent of getting 3 or 4 months in arrears in deliveries. We have already given

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* Not printed.

you our experience with regard to deterioration in storage against Question No. 66. We have no definite information with regard to conditions prevailing in dealers' godowns.

89. Under similar storage conditions we are of the opinion that Java sugar will deteriorate to the same extent as a good quality Indian sugar.

It is only in very recent years that the keeping quality of sugar produced in India has become a subject for serious consideration, since large stocks of sugar must now be stored throughout the monsoon period. Since it has been recognised that there has been a vast improvement in the quality of sugar manufactured in India, the keeping quality has also undoubtedly improved.

90. With the exception of the demand for Indian-made sugar by a limited number of orthodox Hindus on religious grounds Java, or other imported sugar is preferred, particularly by the middle and upper class Indian consumers. The reason for this is, we believe, the uniformity of grain and superior, consistent colour of the imported sugar.

91. The average quality of sugar manufactured in India is inferior to imported Java sugar but there are many factories in India producing a final product equal if not superior to that of Java.

The average Indian sugar is inferior to imported Java sugar in respect of purity, colour and uniformity of crystal size.

92. In our opinion the manufacturers carry the bulk of the stocks of Indian-made sugar, the only dealers carrying stocks to any large extent being those at ports where storage facilities are offered by the Carrying Companies. Upcountry dealers normally carry only sufficient stock for the immediate need of local retailers.

93. Yes. We consider this most desirable.

94. We favour a Central All-India Selling Organisation, provided licensed control of production is also introduced. We consider however that it should be independent of Government control.

95. The standardisation of sugar produced in India presents so many difficulties that we are not in favour of adopting such a system, *e.g.*, classification of sugar quality will be dependent upon visual examination by producers, brokers and buyers and the various visual examinations will undoubtedly lead to many controversies which will necessitate the appointment of official referees, etc. Further, it is known that sugar, especially sulphitation, deteriorates in colour during storage and this deterioration will present a difficulty if a standardisation system is adopted.

96. (*a*) We have done no business so far on the basis of sugar standards. The reason we have not yet sold on this basis is that the graduated scale of price difference has not yet been agreed upon and the Industry as a whole is not prepared to sell on the basis of the standards. It is also felt that most factories are not yet in a position to turn out a uniform product capable of being graded under the standards.

(*b*) Yes. These standards are being used extensively at all our factories for internal control.

97. As opposed to standardising sugars, Messrs. Begg Sutherland & Co.'s Group of Factories are to base their selling standard in respect of the next season, as follows:—

Factory Managers are to be asked to lay aside a certain number of bags of sugar now of a standard which they expect to maintain during the next season. These bags are to be used as samples next season and the output based on these samples. Special care will be taken in storing these bags during the monsoon.

98. The possibilities of establishing a central marketing organisation, including a complete survey of markets, has been before the Indian Sugar Mills Association from time to time, but no progress has been made. We are in favour of an organisation on the lines of the Cement Marketing Board being set up, provided its control is vested in an independent body

and it embraces all producers, with Government prohibition of new factories and extensions for purposes other than improvement of quality and efficiency.

The establishment of a "futures" market by dealers Associations, on the lines of the East India Cotton Association should make for stability in prices by providing security for dealers operations, and thereby improving the general trade in sugar.

99. Over a period of seven years we believe the consumption of sugar, including Khandsari, and sugar refined from gur, to be about 1,300,000 tons annually, but as a result of the lower prices now ruling this figure should be exceeded.

An increased advertising campaign by the industry through its Associations and possible collaboration with the Tea Industry would, we believe, lead to increased consumption, the necessary funds being provided on the lines of the Indian Tea Cess.

100. We believe that factory sugar is replacing gur in the trade in increasing quantities, but we have no reliable information.

101. We see no immediate prospects of the establishment of fruit canning in India.

102. This information can be given much better by importers such as Messrs. Ralli Brothers, Ltd., Calcutta, Bombay, Madras and Karachi, Messrs. A. H. Bhiwandiwalla, Bombay, Messrs. Parasram Paroomal & Co., Calcutta, and Messrs. Kian Gwan Co. (India), Ltd., Sassoon House, Calcutta.

103. It may be accepted that Java, the chief importing country, has not realised remunerative prices for her sugars in any year between 1930 and 1936. In support of this view there is the knowledge that Java's production has fallen from 3,250,000 tons in 1930 to 500,000 tons in 1936.

104. None by sea so far as we know. A relatively small quantity finds its way across the Northern frontiers.

We do not consider India could profitably export sugar unless world prices advance very considerably and then only if Indian sugar received specially favourable treatment on entry into the United Kingdom. There is, of course, the very remote possibility of India being in a position to sell a portion of her production for export at a loss, provided there was a compensating rise in internal prices.

105. The imposition of the first levy of Excise had some effect in not inducing unadvised expansion which would, however, have been better prevented by a system of licensing and zoning at the time protection was given, and in relation to a considered estimate of the demand existing for sugar in India. The latter imposition coincided with a period of abnormally low prices for sugar, which persists to-day. Owing to trade conditions the manufacturer, except for a very brief period, has not been able to pass on any share of the excise to the consumer. We have never understood why the cane growing section of the industry has not been called on to bear some share of the excise. The industry could have accepted with comparative equanimity a levy on profits on a reasonable scale.

106. A certain quantity is absorbed in the manufacture of country tobacco. Where distilleries exist molasses form a base for the production of alcohol. Recently a molasses exporting corporation has set up an organisation for the collection and export of molasses and has made extensive purchases. No data is available with us regarding the extent of these transactions but they must be of considerable magnitude. The prices realised do little more than cover handling charges. The residue we destroy in specially designed furnaces.

107. This has partly been dealt with under the preceding question. We understand the destination of the molasses exported by the Corporation is the United States and the United Kingdom and it is used for the production of industrial alcohol. The possibility of export is handicapped by the inadequacy of transport facilities.

108. We are not altogether clear as to what is meant by "effective". If the development of an industry by an increase in production of 1,000,000 tons is effective, the answer is "yes". If "effective" means the establishment of an ordered industry with security of capital combined with sound finance, the answer is "no".

The effect of the import tariff, created in 1932, has been to create a barrier against imports from abroad behind which the industry has developed at an extraordinary rate of progress—a very unhealthy rate as events have turned out. This expansion has taken place without any control either by Government or the industry itself. What appeared to be an attractive outlet for capital seeking employment has resulted in the launching of numerous undertakings without any proper consideration being given to local conditions. Supplies of suitable raw material—financial requirements and in many instances without adequate, or even any expert knowledge. The result has been that although India has been rendered self-supporting as regards her sugar requirements, her revenues have suffered severely from an almost complete stoppage of imports, while the domestic industry due to the reckless establishment of factories—many of which are unsuitably situated, the need of replacing revenue hitherto realised from the import tariff by the imposition of an excise duty—an utter absence of any organisation for the marketing of its sugar finds itself to-day confronted with a situation which, to say the least of it, can only be described as extremely critical even in the case of the most efficient units of the industry.

109. The original object of protection aimed at the country producing its total sugar requirements, and this object has already been attained. We therefore consider that the extent of protection should be kept at such a level as to limit imports of foreign sugar.

We are of opinion that the existing level of protective duty is such that the ryot obtains an equitable return for his enterprise, and that this will only continue provided the position is not aggravated by imports of sugar from abroad.

It does not follow that world conditions will remain unaltered between now and 1946, and we therefore recommend the present level of protection being maintained, and further, that the Government should take powers to regulate it as and when necessary, to limit the entry of foreign sugar into the country.

110. (1) Improvement in Agriculture and Communications and the application of research so as to reduce the cost of cane and improve its sugar content.

(2) Means to control borer infestation and simultaneously increase the sugar content of the cane.

(3) The adoption of the zoning system which will allow factories to help the small grower to make use of the results of research.

(4) Means to ensure the manufacturer obtaining a fair share of the protection by correlation between the cost of cane and effective selling price of sugar (after deduction of Excise) which will demand a centralised marketing organisation with power to regulate sugar prices.

111. So far as we are aware, no industry has been affected by the import duty on molasses.

The Mahaswastika Sugar and Industrial Corporation, Ltd., Gorakhpur.

Letter No. 4—6/2112, dated the 25th June, 1937.

In response to the general questionnaire issued from your Office to the Sugar Factories, we beg to submit herewith a reply to the same together with an answer to Question No. 80 on the prescribed forms. Please own receipt and oblige.

A reply to General Questionnaire.

Production of Sugar.—Introductory.

1. This factory was started in 1932-33 but it has only worked successfully in this season, that is, in the year 1936-37 and its capacity at present is 200 tons per day of 22 hours working.

2. Nothing can be said for the past years as we have not got the records, this year we have turned out in 1936-37:

First Sugar	26,130 maunds.
Second Sugar	6,935 ,,

3. (*a*) Cane supply is adequate in this locality. The important markets are far away from here and lime-stone, etc., are fetched from far off places.

(*b*) Yes. We are on the main line.

(*c*) There is no trouble about the skilled labour.

4. We have got double sulphitation process. Carbonation process gives better recovery and in most cases better quality of sugar and results than sulphitation process.

5. We have this year put up a new milling plant together with a set of centrifugals, triple effect, Juice heater and a Calendria pan in the boiling house. We have also put up a new boiler. We have spent Rs. 2,86,000 this year on our extension.

6. We are thinking of putting in some more centrifugal machines and one vacuum pan together with some pumps.

7. (*a*) The amount of local fresh cane available in a particular locality at the gates.

(*b*) 600 ton plant.

8. Some of the equipments are now available in India, but they are not so good as those supplied from foreign countries.

9. (i) Only to a certain extent.

(ii) The Industries Department does not give technical assistance.

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Raw Materials.

10. No. We do not cultivate sugarcane ourselves. We are unable to get land easily for farming.

11. (*a*) *Nil.*

(*b*) *Nil.*

(*c*) *Nil.*

(*d*) *Nil.*

(*e*) We have got no first hand information. As reported 300 to 500 maunds per acre. The sucrose content is 12·10 maunds on 100 maunds of sugarcane.

(*f*) We are not in a position to give this information as we have not got farming of our own.

12. (*a*) We have got a bigha this year for our experiment.

(*b*) *Nil.*

13. *Nil.*

14. (*a*) The available quantity of sugarcane has just been doubled as compared to the past seven years.

(*b*) We are not in the know of it.

15. The cane is damaged due to frost or other diseases and pests to the extent of 50 per cent. or even more.

16. We have got assurance from the cultivators and we hope to get our full supply, but whether it happens to be good or bad we do not know. The principal varieties of sugarcane are Coimbatore varities No. 210 and 213.

Maundage is not known.

17. There was no competition this year. The price of sugarcane used to go high in the past years when the price of sugar was about Rs. 8 or Rs. 9 per maund. At that time the price of cane used to go up to annas 8 per maund.

18. (*a*) Nothing can be said on this point.

(*b*) Nothing can be said on this point.

(i-iv) *Nil.*

19. Of course the production of sugarcane this year was in abundance and was in excess of requirements, restrictions are necessary.

20. We are not in a position to give correct information on this point.

21. We cannot say anything on this matter.

22. (*a*) Yes. We agree it is a bit impracticable to acquire land for cultivation of cane.

(*b*) This zone system could be worked successfully and it will prove beneficial only when the factories restrict themselves to their own area. But there are various difficulties in the way of allotting and maintaining the zones.

23. At present we won't be able to do much in this connection.

24. (*a*) Yes, if it is fairly done.

(*b*) (i) Yes.

(ii) Yes. In our opinion no new sugar factories should be allowed to come up unless the consumption of sugar exceeds the productions.

25. (*a*) Our chief supply was at the gate.

(*b*) We have got 1/10 of our cane supply by rail.

(*c*) We have not got any tram system in our locality. We cannot say for any variation from year to year as we have only worked our factory this year.

26. Our gate cane is entirely transported by carts and not by lorries. The average weight carried is about 16 maunds per cart. If country carts are substituted by rubber-tyre carts, it will carry between 40 and 50 maunds. We had one Dunlop tyre cart and it carried an additional weight of 20 maunds. But we doubt very much as to how far the carters will be prepared to improve their carts.

27. It is fairly good. Main road is a metalled one while the feeder roads are katcha ones.

28. This year sugarcane was brought to us from a distance of 20 miles and near about. The time taken between cutting cane and delivering it to the factory was on the average 48 hours. The cane is covered by means of straw (cane leaves) by carters during transport by carts.

29. If they have to hire carts, they have to pay at the following rates: one anna per maund up to a distance of 5 miles and one anna six pies per maund up to the distance of 20 miles.

30. No toll is levied on cane carts coming to our factory.

31. We arranged our cane supply through growers and these growers were given slips from us giving the dates on which they should supply cane. The growers arranged the carts at our instructions in such a way that it was always continuous and uniform and we never felt the shortage of cane. In return we tried our best to relieve the carts as quickly as possible

sometimes within two or three hours but never we detained a cart more than 12 hours.

32. This year we had our railway cane supply from a distance of 80 miles and it took on the average 4 to 5 days between cutting and delivery at our factory. The railway arrangements for transport were not so satisfactory as they should have been for our cane trucks were unnecessarily detained at Gorakhpur.

33. This year due to abundance of sugarcane crop the railway had given concessions as under:

	Per wagon.		
	Rs.	A.	P.
Open cane wagons 6 to 8 tons, 14 ft. and open wagons 10 tons No. 1 to 250 14 ft. . . .	4	0	0
Covered goods wagon 4 wheeled	4	8	0
Open cane wagon 10 tons No. 5347 to 5546 16 ft., 4 inches also open wagons 11 tons Nos. 251 to 300 15 ft., 7 inches cage trucks old type 19334 10 tons	5	4	0
Cage trucks new type 12 tons	6	0	0

The substitution of a flat rate on the basis of the above concessions will be preferable to maundage rate.

34. Nothing particular to remark.

35. No tramway system.

36. Yes. A tramway system will be advantageous in this locality, but there is no proposal for a lay-out of the same.

37. We have not got these figures in hand.

38. This year we purchased the whole of our supply of cane direct from the cane growers.

39. There was no arrangement whatsoever with the cultivators this year. We have given nothing to cultivators so far.

40. No commission is paid. We purchase direct from the growers.

41. We did not get our cane supply from any association.

42. We have got weighbridges at our gates and we get the cane weighed there and the payment is made at the exit without any delay.

43. We cannot say for the past years, but the rate this year ranged between annas 4-9 to annas 3-6. The price of cane was always according to the prices fixed by the Government.

44. The prices paid for cane were not on the exact basis of the price of sugar. The price of cane was fixed according to sugarcane rules by the Provincial Government. Due to very low price of sugar it was reduced to annas 3-6 per maund, *i.e.*, 9 pies below the minimum price fixed according to rules.

45. We have no experience of this variation.

46. The price of gur has also gradually come down with the price of sugar.

47. We have paid the prices of sugarcane as per fixed rules which were notified from time to time from the Industries Department and no excess price was paid.

48. The basis on which the minimum prices were fixed were never in accordance with the rates of sugar then prevailing. These rates and fixation of prices should always be kept in line with the prices of sugar then prevailing. It will be better if the price of cane be fixed according to the quality of cane, *i.e.*, either on sucrose content or brix content.

49. We are not in favour of it.

50. We have no records for the past years and this year the season lasted from about 1st of December, 1936, to 1st week of June, 1937.

51. It will result in over-production of sugar to a greater extent and unless some means are explored to utilise the surplus production of sugar.

52. We cannot say anything on this point; it will do no good.

Season time.

53. Skilled . . 154 Unskilled . . 539

Off season.

Skilled . . 57 Unskilled . . 42

54. One or two persons of the superior staff are employed who come from other parts of India. Usually foreign Erecting Engineers come to erect the plant.

55. Completely.

56. The company has provided free houses to some of the employees and has kept a dispensary for the employees and has also made adequate arrangements for water and sanitation.

57. We had no surplus bagasse power and we did not bale it.

By-Products.

58. Molasses is the only by-product of our factory.

59. The outturn of molasses this year was 16,410 maunds and its price was anna 1-6 per maund.

60. We have sold our whole output of molassess to local dealers at the above rate who remove the molasses from our storage tank. We have got no idea of the other matters contained in this question.

61. We have been able to sell our molasses this year. If we are unable to sell the molasses we may have to throw it off. In our opinion the preparation of power alcohol from molassess is best. It has been also used metalling of roads in place of tar.

62. We had had no surplus bagasse.

63. No.

Storage and transportation of sugar.

64. We have only turned out sugar this year and our stock was in the beginning *nil* and at the end of the season 11,343 bags each bag weighing 2½ maunds.

65. We have stored the sugar bags in our sugar godown the capacity of which is to contain 30,000 bags. At present we do not contemplate increasing our godown capacity.

66. We have not got experience of very long storage. Usually sugar is damaged when water gets inside the godown or the sugar contain moisture. This year 22 bags were damaged in our factory.

67. It is reconditioned or melted if necessary.

68. To a great extent.

69. Sometimes only to a slight extent due to mishandling.

70. No, we have so far experienced no difficulty.

71. No.

72. We cannot give the information required as we had have no occasion this year.

Capital amount and Overhead charges.

73. Our books are not yet ready and no balance sheet has been drawn so far.

74. We have written off no depreciation but will do according to Companies' law.

75. *Nil* (our factory is a new one).

76. *Nil.*

77. Our working capital is arranged by the Managing Agent through bank and the rate of interest is 3½ per cent.

78. Our Managing Agency commission is Rs. 6,000 per year; our head office establishment charges are about 11,000 a year.

79. About 15 per cent. dividend net.

Efficiency of Production.

80. The forms are being sent separately.*

81. *Nil.*

82. If the capacity of the plant is extended further the cost of production can be reduced by about 15 per cent.

Marketing.

83. Cownpore, Bombay, Ahmedabad, Karachi and Calcutta.

84. Sugar is generally sold through brokers, and the terms are settled according to contract.

85. Yes.

86. We have got no figures.

87. There is little difference practically. It only varies by a few annas.

88. Generally dealers do not store but supply direct to the consumers.

89. Yes, it does. We don't know if there has been much improvement in the keeping quality of Indian Sugar.

90. Yes, refined sugar is generally preferred by foreigners on account of their fondness for the same.

91. The average quality of the Indian sugar is not equal to the Java sugar. It has not got the same luster and whiteness as Java sugar. Also the size of crystal of Java sugar is bigger than that of average Indian sugar.

92. The Bank advances against the sugar stock and charges an interest of 3½ per cent. per annum on the amount advanced. The stock are mostly carried by manufacturers; dealers hold very little stocks with them.

93. Yes.

94. Yes. A Central all-India selling organisation will be found beneficial for the sugar industry.

95. Yes. It should be done per instructions of the Central Sales Organisation. Certain factories should be asked to manufacture a certain grade of sugar keeping Indian Sugar standards.

96. (*a*) Little, so far.

(*b*) No.

97. The usefulness of these standards can be increased if the factories accept them and start using them for standardising their sugar.

98. We have nothing to say on this point.

99. We cannot give a correct estimate of our own of the consumption of sugar in India. There are possibilities of increasing the consumption of sugar, if some more associations like the Tea Cess Committee come up.

100. In sweetmeat trade sugar is generally used and gur is being thrown out of the market.

101. In our opinion there is not much scope for these industries in India. Fruit preservation is the only thing that has got some scope.

102. Our factory being a new one we have got no figures.

103. We have got no idea about this too.

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* Not printed.

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104. No sugar has been exported by us.

105. The Sugar Excise Duty of 1934 resulted in an effort to increase the efficiency of plants in the matter of extraction and recovery of sugar. But the effect of additional duty levied in 1937 has been too much trying upon the industry. It has placed the village industry of sugar at a great advantage. At present Khandsari or deshi sugar stands competition with the factory-made sugar with the result that the factories have to suffer.

106. Generally molasses merchants come and purchase the molasses and take away from our factory.

107. We don't know if there is any export of Indian molasses to foreign countries.

Claim for Protection.

108. This protection was enjoyed by the factories to a very great extent up to the year 1933. Even now if the over-production is checked, it will be enjoyed to a certain measure.

109. Yes. It is necessary to continue the present amount of protection otherwise it will be ruinous to the industry.

110. The following things will help the industry:—

(i) Removal of additional excise duty levied in 1937.

(ii) Export of surplus sugar and molasses to other countries.

(iii) Research work to be done to improve the varities of cane and to find out varities with greater sucrose content.

111. It has stopped the import of molasses to India. The duty has not adversely affected any industry in India.

Saraya Sugar Factory, Gorakhpur.

ANSWER TO THE TARIFF BOARD GENERAL QUESTIONNAIRE, 1937.

Production of Sugar.

(Introductory.)

1. The production of deshi sugar on the Saraya estate was started in the year 1909. The capacity in the first year was very small, but was increased every year. In 1911 Vacuum Pan process was introduced and in 1920 a new installation was placed and the capacity was brought up to about 800 tons a day.

Whereas the amount of cane around the factory increased every year, the capacity of the factory was brought up to about 2,000 tons a day before the season 1933-34.

The capacity of the factory at present is 2,250 tons a day.

2. *Output*—

1930-31	8·39	Different classes of sugar.
1931-32	8·41	
1932-33	7·80	
1933-34	9·83	All No. 1 sugar.
1934-35	9·06	
1935-36	9·67	
1936-37	10·43	

3. Yes, the Saraya Sugar Factory is advantageously situated as concerns cane supply, about 75 per cent. comes by country carts, 25 per cent. by

rail (the longest distance by rail is about 60 miles). The freight for lime, sulphur, cokes, bags and other materials is higher than the medium.

The freight to the important markets, *i.e.*, Calcutta, Bombay, Madras and Karachi is also fairly high, and nearly equal to all the ports (about Re. 1 per maund).

(*b*) *Facility of rail, road and other communication.*—The Bengal and North-Western Railway has in the last years, railed our cane to our satisfaction, only the freight rates are too high.

The road (about 4 miles long), which connects the factory with the main pucca road and which several years ago was taken over from the Saraya Estate by the District Board, is in a deplorable condition, the repairs carried out by the District Board are absolutely insufficient and no care is taken for any improvement. A tramway is being put up for transport of cane.

(*c*) *And other considerations such as adequate labour supply.*—We have sufficient supply of labour from the Saraya Estate and other surrounding villages.

4. We are using the Double Sulphitation process.

As far as we know no other process other than sulphitation and carbonitation are used here in India. A few factories are combining these process with juice or syrup filtration after addition of different filtraids (Norit-Supercell, etc.) but these modifications are no special process.

For the sulphitation process less lime but more sulphur is required than for the carbonitation process. The sugar produced is only a little dull in colour, than that produced by the carbonitation process, but the colour is not stable and after a year or so a yellowish decolorisation appears

In the carbonitation process the quantity of lime used is about 10 times of that used in the sulphitation process, but where the lime in this process (carbonitation) has to reach the factory limestone, the weight, on which freight has to be paid, is about 20 times as the weight of slake lime used by the sulphitation process. This fact makes this process expensive and especially here in India, where the distance from the factories to the quarries is long. The advantages of this process above the sulphitation process are, better colour of the sugar, lower losses in filtermud and molasses, higher output on account of a better purification of the juice and a sugar with better keeping qualities.

As concerns of cost of installation, a carbonitation plant is more expensive than a sulphitation plant, but, on the other hand, the yearly expenses for replacement for a sulphitation plant are higher than for a carbonitation plant.

We have no figures at our disposal for the comparison of the price of production of Indian carbonitation factories with that of Indian sulphitation factories. Several years ago this question was taken up in Java by several experts, and for some years trials and calculations were carried on and were published in *Archief Voor Suikerindustrie.* The final conclusion for the Java sugar factories was that there was, practically speaking, no difference in price of production between the sulphitation process and the carbonitation process, the advantages of the carbonitation process weighed fully up against the higher expenses.

Here in India, where the distances are very greater, this question will have to be calculated for every individual case, a general rule cannot yet be given.

5. From 1930 to 1933 several big changes were carried out, which however did not increase the capacity. In 1933 the capacity of the factory was increased from 800 to 2,000 tons.

There in the season 1933-34 the plant did not work to the full satisfaction, the lime and sulphur station, the laboratory and the Chief Engineer's office were shifted over in a new building. The heater station, the filter-press station, crystallizer station and centrifugal station were enlarged. Furthermore several minor changes were carried out in the lay out. After the season 1934-35 and in 1935-36 again several changes and replacements were carried out.

The amount spent in the consecutive years were:—

	Rs.	A.	P.
1930-31	2,11,553	15	2
1931-32	2,77,811	12	7
1932-33	43,676	6	5
1933-34	22,57,926	1	9
1934-35	2,03,767	5	11
1935-36	57,451	11	5
1936-37	Not yet finished. Our accounting year closes on 30th September, 1937.		

6. One Turbogenerator 1,250 K. W., one Boiler about 5,000 sq. feet, two Dorr Clarifiers, one Evaporator, two Pans, two Crystallizers, six Filter-presses, one Sugar Dryer, 20 Miles railway, 2 Locomotives, 150 wagons, Enlargement of the workshop, one godown, several quarters for fitters, a village for coolies, drinkwaterline, sanitation, Enlargement of our hospital, school building, club house, etc.

All these extensions were to be done in the run of 5 years. At present, however, all extensions are stopped as long as our whole gain is going in the payment of the Excise Duty.

7. (*a*) Fresh and ripe cane, efficient staff, fuel economy, efficient machinery, fair capacity with few and big units, good situation for material and sugar markets and sound financial basis.

(*b*) We are not able to answer this question because the remunerativeness of a factory depends on so many local conditions, which have to be taken into account, that a general answer is excluded.

If we take the conditions as they *really* are to-day no factory of whatever capacity, can be operated economically, because the market sales prices for factory for nearly all the factories is under the cost of production.

As a general remark, for the present conditions, can be mentioned, that a factory of whatever be the capacity above 250 tons per day, which is able to grow its own cane to the extent of its total yearly requirements in a tract of land which is suitable for cane and where no exhorbitant water rates are to be paid, will be profitable.

8. Only for small mills different units are obtainable here in India, for really big scale mills only structural work and tanks are obtainable all the rest has to be imported.

9. As a matter of fact, we never asked for any assistance and are therefore unable to answer this question.

The statistics, which are published by the above mentioned Institute are reaching the factories so late that the value of these publications is often reduced to nearly nothing.

Raw Materials.

10. The sugar factory is not cultivating cane, but the proprietors are cultivating cane on the seer land belonging to their Estate.

There are many difficulties in leasing lands and rather it is impossible to lease land with the present tenancy law in force.

Leases for only one year, or better said for only one crop, are not obtainable.

11. The estate is holding 1,672 acres as seer land.

(*b*) *Average area under cane each year*—

1930-31	about	300	acres.
1931-32	,,	300	,,
1932-33	,,	330	,,
1933-34	,,	533	,,
1934-35	,,	538	,,
1935-36	,,	621	,,
1936-37	,,	738	,,

(*c*) Please see under (*e*).

(*d*) *System of cultivation with special reference to fallows, rotation and manuring.*—We strictly follow the Java system of cane cultivation. The cane is planted in 20″ wide and 2′ deep trenches which are 4′ apart from one another thereby making a ridge of 28″ wide and 2′ high in between every two trenches. Gradually we go on earthening the cane and before the heavy rains set in the ridges become drains for draining the rain water.

We only apply Ammonium Sulphate manure in two doses. In the case of heavy soils first dose is applied at the time of planting and the second one 2½ months later. In the case of sandy soils the first dose is applied when the plants are 10″ to 15″ high and the other one month later. For manuring the holes are dug at a distance of 12″ or 15″ as the case may be with wooden rods supplied with iron points and the manure is put into the holes with spoon of special size. The manure is applied at the rate of 4 maunds per acre in Plant cane and five maunds per acre in Ratoon cane. Apart from Ammonium Sulphate manure we apply cow dung and factory press-mud as manures. Factory press-mud has been proved to be very useful.

As regards rotation we generally divide a farm into four plots and the crops rotate as follows:—

Plots.	1st year.	2nd year.	3rd year.	4th year.	5th year.
1	Plant cane.	Ratoon cane.	Green manuring and fodder.	Wheat, gram, arthar or paddy.	Plant cane.
2	Ratoon cane	Green manuring and fodder.	Wheat, gram, or arthar or paddy.	Plant cane	Ratoon cane.
3	Green, manuring and fodder.	Wheat, gram or arthar or paddy.	Plant cane .	Ratoon cane	Green manuring and fodder.
4	Wheat, gram or arthar or paddy.	Plant cane .	Ratoon cane .	Green manuring and fodder.	Wheat, gram or arthar or paddy.

After every four years the position of the crops becomes the same as it was in 1st year.

(e) Variety.	Harvest year 1936-37. Maunds cane per acre.	Maunds sugar per acre.
Co. 213	634	70·9
P. O. J. 2878	830	94·1
P. O. J. 2883	801	90·3
Co. 290	723	79·0
Co. 285	315	32·0
Co. 373	821	93·7
Co. 256	964	104·4
Co. 331	1,032	108·6
Co. 350	774	87·0
Co. 393	834	94·4
Co. 421	958	95·6
Co. 417	...	...
Co. 370	812	98·9
Co. 312	693	83·0
Saharan	561	56·1

12. (*a*) As you will see from the amount of cane varieties grown by us [*vide* under (ii) (*e*)], you will understand, that our total cultivation is hardly anything else than trials on big scale to find the most suitable cane variety for this locality. Every year new varieties are introduced, and varieties which have not shown good results are abandoned.

(*b*) The seed cane is taken from the most healthy plots of the cultivation and are sold to the cultivators.

13. Since the last 5 years we have started systematic trial fields in which different kind of trials, *i.e.*, time of planting, varieties, manuring, early and the ripening varieties, etc., are carried out. The results of 5 years trials don't mean much in agricultural research, whereas we can't give any definite answer to your question. The results obtained uptill now indicate, that the following varieties are useful as early ripening:—

1. Co. 370.
2. Co. 373.
3. Co. 350.
4. Co. 393.

and that the following are useful as late ripening:—

1. Co. 331 }
2. Co. 421 } Not quite sure.
3. Co. 417 }

As concerns other trials, the number of results is still too small to give any definite answer.

The Agricultural Department has been of some assistance in supplying seed cane whenever wanted, also we are sometimes exchanging results.

14. (*a*) The quantity of cane has increased regularly for the last seven years, the chief reason being, that it was the most paying crop.

(*b*) The quality of cane has also improved regularly, which is mainly due to the introduction of improved varieties from Coimbatore. These varieties not only have a higher sucrose content but yield more cane per acre as compared with Desi cane, which was formerly planted.

In our vicinity the ryots have been induced to do the cultivation in a better way than formerly by good example of the Saraya Estate plantations.

15. In our locality there is no damage due to frost so far.

As concerns losses due to diseases in 1935-36 we carried out an experiment on this head. We found out, that about 25 per cent. of the gate cane was diseased and that the output of the diseased cane was about 5 per cent. less than that of the healthy cane.

In the same year the losses by insect pests were fairly large, we estimated in some cases from 10 to 25 per cent.

In the season 1936-37 the losses due to insect pests were low.

16. Our factory is not assured of a sufficient supply of suitable cane, only this year we have been able to crush nearly full capacity, it is very much the question if we next year will have sufficient cane, because the cultivation at the present rate does not pay the cultivators and the planting has been reduced.

The principal variety crushed here is Co. 213, furthermore a certain amount of Desi cane and Co. 290.

Co. 213 is yielding about 300 maunds of cane and 31 maunds of sugar to an acre.

17. There has been very keen competition for cane as there are too many factories here close together. This year was the first year when there was no competition for cane as there was plenty of cane available.

18. (*a*) It has slightly increased.

(*b*) The area in which the Saraya Sugar Factory is situated has always been producing a fair amount of sugar, from olden days the Ghaur Chaura gur was well-known in the market. In later years when the factories arose and the cane prices went up, less cane was turned from the factories increased the area under cane was yearly enlarged.

In this area the price of cane varies with price of gur, and competition from other factories, which depends upon price of sugar. Sugarcane is the only cash crop in this locality.

Climatic conditions are good and rainfall satisfactory. Excess and defect of rainfall affects the outturn of cane and so has a bearing on the price of cane.

19. No cane has been left within the area, which could be called Saraya area, on Collector's request we have even crushed some 5 lakh maunds of cane from other factories' areas in which cane was in excess this year.

As the situation is at the present, where we are very close to overproduction or have ever exceeded it, and still more new factories are going up as well in British India as in the States, it is quite certain that some kind of restriction is required.

Our suggestions in this direction would be as follows:—

(1) All sales of sugar have to be done through a Central Body which is controlled by the Government or is given statutory power.

(2) All sugar factories must by law be forced to join this body and to abide by the rules and regulations of same.

(3) This body will have to find out the consumption of sugar and will have to regulate the production in such a way, that no overproduction is possible.

(4) The sales price is fixed by the Central Body in such a way, that the cane can be paid with at least annas 4-6 per maund, that the Government is getting its excise duty, and the factories are getting a reasonable profit.

(5) All the factories are licensed to a certain yearly outturn in sugar and no new factory can be erected without a licence.

(6) The yearly amount of sugar required is divided over the factories in proportion to their licensed yearly outturn.

(7) The factories will have to make their own arrangements as concerns to contract a sufficient amount of cane before the season, *and it must be made clear to the cane-growers, that only contracted cane will be crushed by the factories.*

(8) The factories will have to submit every week or fortnight the crushing datas considered necessary to the Central Body. These datas worked out in easy readable statements and are published as soon as possible and so are the sales and consumption figures.

This is in very few words the rough outline of what we think the only and the shortest way to stabilise the sugar industry and get it working to the best for the cane-growers, the Government and the manufacturers.

We quite realise that there are lots of technical difficulties to be faced, but they can never be of such a magnitude that they cannot be surmounted.

Also the factories in the Indian States must in one or another way be induced to co-operate in this scheme.

20. The information is not available, and it is fairly impossible to get it, because none of the cultivators are keeping any record in which the expenses on cane cultivation are specified. But it is possible to form an idea on basis of our own farm experience. Under (11) we gave you a specification of our cost of plantation. If we now from the total amount subtract the expenses for manures, irrigation and establishment then we come to a price about Rs. 38 per acre. If the grower is doing the work himself, then he is earning his own wages, if not, he is surely paying the labour very much less, than we are doing and possibly also getting more work out of them, which means, that the calculated price is too high. Anyhow by an average of about 300 maunds per acre the cost price of the cane is about annas 2 per maund.

This information is given with all possible reserve.

21. The main difficulty of the growers here is that they have no water.

Sinking of wells, Persian wheels, eventually tube-wells are the remedies. There are no roads and hence transport difficulties are very great.

22. (*a*) Our views are that well acquisition as leasing of land is practicable and it will enable the industry to produce cane for a lower price than it has to pay at present.

All efforts should be done in that direction.

(*b*) This year the "zones" have nearly come in a natural way. Most of the factories take the cane just around it, and some were not even able to finish it. But there can be no compulsory control over the tenants.

Several outstations, where formerly 10 to 15 factories were working, this year only one or two factories were weighing cane and no competition was started anywhere.

It would be quite easy on basis of the cane figure of this year to make a rough "zoning". As a matter of fact this question as far as concerns railcane has been in study by the Gorakhpur Sub-Office of the Indian Sugar Mills' Association for the last three years and we expect that a final scheme can be put up this year for the Basti, Gorakhpur and Saran Group.

As concerns "zoning" of the gate cane area, we also think, that the difficulties are diminishing every year. In these years, when every fraction of a pie counts the cane area will increase and consolidate near around the factories and the far off stations will have to give up cane cultivation, because the cost of transportation is too high. We will in this way come to a "natural zoning" and we think that we are not so very far from it.

It is clear that if it comes to definite zoning, the factory in a certain zone will have to arrange itself that the growers are planting a sufficient amount of cane and also the factory will be responsible for the crushing of the amount contracted. But Government legislation is necessary to control the area under cane and regular supply to a particular factory.

23. We are not very much in favour of giving advances to growers, because we have had very bad experience in that direction. But if the return of the advanced money is assured to the factories they will be willing to advance in cash, supply of seed and manure.

As concerns the feeder roads, factories will be willing to take a helping hand in the development of roads to the factories.

All above are possible if factories can make a reasonable profit. With the present prices of cane, sugar and other conditions it is not possible for the factories to take up any of the above improvements.

24. (*a*) Yes, we answered already this question, *vide* our answer on your Question No. 19.

(*b*) Your Question 24 (*b*) (i) is answered under 19. As concerns the extension of existing factories this question does not arise if the factory licence is given in so many tons of sugar a season. If a factory owner finds it profitable to shorten his season by increasing the capacity of his plant, he can do so, he can however not produce more than his quota.

		Gate cane.	Rail cane.	Tram cane.
25.	1931-32	69·2	30·8	None.
	1932-33	99·2	0·8	Do.
	1933-34	94·5	5·5	Do.
	1934-35	73·8	26·2	Do.
	1935-36	70·4	29·6	Do.
	1936-37	71·4	28·6	Do.

The proportion of rail cane fell down during the 1932-33 season as there was enough of cane available at the gate. Although the extension of the factory took place before the 1933-34 season was started yet the factory did not begin to work normally until the 1934-35 season, which resulted in raising the proportion of our rail cane.

26. All the cane is transported by carts.

About 19 maunds.

We have not employed any rubber-tyred carts. At the present we are making a series of carts in our workshop, which have steel wheels running on ball bearing. The result of these carts will only be known after the next season.

27. Fair though not sufficient.

The main road is good, our own feeder roads are fair, the District Board road, over which about 53 per cent. of our cane has to come, is in a deplorable condition.

28. Most of the gate cane is coming from a circle with a radius of about 10 miles, from the east side we are receiving cane up to a distance of about 20 miles. The average time taken between cutting and crushing will for short distance cane be between 24 and 48 hours, for long distance cane between 48 and 72 hours.

No special protection is used.

29. The growers have mostly not sufficient carts and are using hired carts.

The cost for distances within 8 miles about 2 pies per maund per mile, for larger distances from 1·5 pies to 2 pies per maund per mile.

30. No.

31. The cane is contracted before the season starts and the amount of cane is estimated in the fields. According to the amount of cane to be delivered and the number of working days in the season the growers are supplied with gate passes.

(A complete report about our cane supply is already submitted to the Tariff Board.)

As an average it will come to about 12 hours.

The gate passes are regulated in such a way that no accumulation of carts in the yard is possible.

32. Most of the cane is taken within a distance of 35 miles, the largest distance is about 60 miles.

72 to 84 hours.

Yes. They are improving.

33. The Railway Freight on sugarcane is being charged per truck, and it varies in accordance with the variations in the carrying capacity of the different types of trucks (*i.e.*, 8-10 and 12 tons). There has been no changes in railway freight on sugarcane in recent years. We prefer a flat rate rather than a per maund rate, but a reasonable reduction is very much wanted.

34. The railway freight on material such as lime, limestones, sulphur, gunnybags, oils, manures, etc., are undoubtedly very high.

35. We are only this year starting to lay out a tramway and have not yet any experience.

36. Same answer as 35.

37. We have no definite figures to give. The only thing we can say is that in the hot season the available sugar of the rail cane is about 3·2 per cent. lower than that of the gate cane. The delay of rail cane as compared to gate cane is about 36 hours to 48 hours.

38. 71·3 per cent. of the cane is bought direct from the grower, 20·5 per cent. was bought through the Co-operative Marketing Board and 8·2 per cent. through a contractor.

39. The cane is contracted before the season and a bonus of anna 1 to pies 6 per maund of cane is paid to the grower if he fulfils his contract. With present conditions it will not be possible to do as much as we have done in the past.

40. Our arrangements conform the arrangements prescribed in the Sugarcane Rules. Only 8·2 per cent of our rail cane is bought in that way.

We are paying the following commission:—

For stations this side of nearest junction station.

SCHEDULE No. 1.

Output of Sugar.	Commission per Maunds.
	Pies.
1. Below 9·5 per cent	5
2. 9·5 per cent. and above but below 10·5 per cent. .	6
3. 10·5 per cent. and above	8·5

For stations on other side of junction stations.

SCHEDULE No. 2.

Output of Sugar.	Commission per Maunds.
	Pies.
1. Below 9·5 per cent	5·5
2. 9·5 per cent. and above but below 10·5 per cent. .	7
3. 10·5 per cent. and above	9

41. 20·5 per cent. of our cane is bought through the Co-operative Marketing Board, the same commission as mentioned under 40 is paid to them for rail cane. On the gate cane delivered by the Co-operative Marketing Board about 4 lakhs of maunds, we are paying to the grower pies 6 per maund as bonus. On this cane no commission is paid to the Co-operative Marketing Board but Rs. 4,000 for the expenses for their staff.

42. We have 10 weighbridges for gross weight and 5 for net weight. The operations are done according to the indication in the cane rule.

Our payment office is open every day from about 10 A.M. to 8 P.M. and every grower who presents his *purzies* for payment is paid.

The outstation rail cane is paid twice a week to the Co-operative Marketing Board or the contractor.

43. Average price paid per maund of cane:—

	As.	P.	
1930-31	Missing.		
1931-32	6	3·9	
1932-33	6	1·0	
1933-34	6	1·9	
1934-35	6	0·6	
1935-36	5	9·6	
1936-37	4	10	approx.

In former years it was a rule that the price of cane started on a fairly low level and increased all along the season on account of the excess of cane; this year the highest price was paid in the first months of the season and the lowest in the last.

44. Prices are fixed under the rules framed under the Sugarcane Act XV of 1934.

45. In the last two years the supply of cane has not been influenced by the prices of gur.

46. Price of cane was based on price of gur in former years. For example if price of gur was Rs. 4 per maund then the price of cane would be annas 4 per maund *plus* pies 6, *i.e.*, annas 4-6. But it is not in force now.

The price of gur are at the present very low due to the enormous quantity produced all over India.

47. Up to the season 1935-36 we have usually paid anna 1 more per maund of gate cane and in the season 1936-37 pies 6. The reasons, that we did so, were as follows:—Firstly we wanted that the growers consolidated the cane cultivation near around the factory, secondly we wanted them to plant the cane in the right way and to give it some manure, thirdly to introduce improved varieties. On our own farms, which are situated all around in the Estate, the right way of planting was shown to the growers and most of them have in the run of the years taken over this system of cultivation, most of them are however not giving any manure. The reason, that they are not as yet getting the same results as we are, is, that they in the months of May and June have insufficient supply of water.

It was our idea gradually to lower the price to the level fixed by the Government as soon as they have learned the way of cultivation and are getting good crops. At the present cane prices we cannot compete in the world markets.

48. Our opinion is that the minimum price from the very first moment was pitched too high, which induced the ryots to increase the area under cane cultivation much too fast and at places too far from the mills. (Much of this far off cane in this year turned into gur.)

Furthermore, were the prices given by the Sugar Technologist and on which prices the minimum cane price was calculated market quotations which always are much higher than the actual prices received by the factory f.o.r. factory siding.

The result of all this has been that the grower, as long as the cane rule has been in force, has received more than the Government intended to give him, especially has this been the case after the imposing of excise duty.

This question will be taken up with the Government in Nainital in the run of this month, this question is very complicated and we are not able to make any suggestion at present.

What we would like to see is, that the cane rules are amended so that they induce the growers to grow cane in such a way that the quantity to the acre increases and the sucrose content becomes higher because this is the only way to reduce the cane prices so far that the sugar industry will be able to stand the competition in the world market and make a reasonable profit.

49. The superior early and late varieties of cane are not as yet well known. A small "bonus" could eventually be considered.

		Duration of crushing. Days.
50.	1930-31	168
	1931-32	176
	1932-33	179
	1933-34	140
	1934-35	131
	1935-36	150
	1936-37	164

As a consequence of the agricultural circumstances in this part of India up to this time, the periods for crushing are certainly long for economical crushing. In the last season we worked with a definite loss in the first fortnight of the season and during the last 3 weeks.

The optimum crushing season is here from 10th December to end of April.

51. No answer can be given because no production data of early and late varieties are in our possession. But it will certainly be very advantageous to have early and late varieties to increase crushing days but on the other hand when we are going to restrict the production this will not be necessary.

52. We have had very little to do with the Imperial Council of Agricultural Research, we have nothing to complain against the work of the Agricultural and Co-operative Department of our Government, but surely we want more life in them.

Labour.

53. In the crushing season we employ 336 skilled labour and 1,718 unskilled labour and in the silent season we employ 234 skilled and 358 unskilled labour.

54. No skilled labour is imported from abroad with the exception, of course, of six China Pan-man from Java, and about 13 per cent. of the skilled labour is imported from the other parts of India.

55. As replied to Question 54 all of our skilled labour are Indians. It has not yet been possible to replace China Pan-man with Indians.

56. A major portion of the labour comes from the Saraya Estate and the neighbouring villages and all of them return, after duty, to their

homes, and whatever small portion is left is housed by the factory. We have over 160 well-built pucca quarters (a specious room, a verandah with kitchen and a shaded bath) for the skilled labour, besides 26 superior type double quarters. Almost all of the unskilled labour is from the villages and need no accommodation in the factory colony.

There is a very well equipped dispensary of the Estate wherefrom free medicines and medical attendance is provided to the workers of the factory, and their families. The Medical Officer-in-charge is responsible to look after the general health of the factory employees and the sanitation of the factory colony. There is a Primary school for the education of the children within the factory precincts and a middle school—aided by the Estate—at a distance of a mile and half from the factory. There is small Estate bazar very near the factory quarters wherefrom provisions and other necessities of the staff could be had. Bucket pumps for drinking water are provided near the residential quarter lines and a mechanical water pumping installation is under construction.

Power.

57. Yes.

Prior to season 1935-36 we had to supplement our bagasse fuel supply with fuel wood as indicated below.

The amounts spent are as under:—

Season.	Maunds wood Per cent. cane.	Consumption Maunds.	Rate per cent. Maunds.	Amount spent.
			Rs. A.	Rs.
1930-31 .	4·0	82,000	25 0	40,500
1931-32 .	2·10	49,000	25 0	12,250
1932-33 .	0·87	25,000	25 0	6,230
1933-34 .	1·93	80,000	23 12	19,000
1934-35 .	1·07	63,000	23 0	12,200
1935-36 .	*Nil*	*Nil*	*Nil*	*Nil*
1936-37 .	*Nil*	*Nil*	*Nil*	*Nil*

Yes.

By-products.

58. Molasses, press cake and bagasse are the only by-products.

	Crushing season.	Outturn.	Price per maunds.
		Mds.	Rs. A. P Rs. A. P.
59.	1930-31	50,033	2 13 0 to 2 10 0
	1931-32	Missing	1 4 0 to 0 8 6
	1932-33	99,417	0 8 6 to 0 2 0
	1933-34	159,918	... 0 2 0
	1934-35	98,102	0 1 6 to 0 2 0
	1935-36	164,309	0 1 6 to 0 2 6
	1936-37	216,090	... 0 2 0

60. Prior to season 1934-35 the Province of Bengal was the principal market for Indian molasses and was able to consume nearly the whole amount of molasses produced in India. At the present moment Bengal is consuming as much—perhaps even more than formerly—but the production of molasses has increased to such an extent that only the best situated factories can sell their molasses in this market in which price is at present a fairly low on account of the increased production.

In the year 1934 The Indian Molasses Co., Ltd., came into the market with the idea to buy and to export the Indian molasses to England. It was, at that moment, expected that a fair price would be paid by The Indian Molasses Co., Ltd., to the manufacturers, but this has not come true. The reason is that the distances here in India to the ports are so big that most of the prices which The Indian Molasses Co., Ltd., can pay for the molasses at Calcutta goes in freight. Furthermore, Cuba has in the last two or three years started to produce the so-called hightaste molasses which is nothing else than cane juice evaporated to the density of molasses and where this produce contains more sugar than exhaust molasses, this is preferred by the distillers as a basis for Alcohol.

The result of this has been that the molasses export from India is handicapped to a certain extent, and the prices this year are lower than last year.

For the last two years we have sold our molasses to the Indian Molasses Co., Ltd., on a f.o.r. Sardarnagar basis. The molasses are loaded in tank wagons by us by which it is transported to one of the steamer ghats from where it is further shipped by steamer to Calcutta.

The railway facilities are not yet adequate. The number of wagons is too small.

Freight rates are high but we are not concerned with it as Indian Molasses Co., Ltd., are doing all themselves, so we cannot give you any further ideas.

61. Under the present conditions we have no other go than to sell away our molasses at whatever price is obtainable or throw it away.

The molasses could be used for the production of power alcohol, and other products which could be made of alcohol, such as acetic acid, etc.

62. This season (1936-37) we have saved about 6,600 tons of bagassee. For industrial purposes the bagasse can eventually be used for making:—

Paper pulp, Celotex, Trectex, etc.

We have been trying to sell it, but up till now with very little success.

63. The filter press cake is used here as a manure and is doing well.

Storage and Transportation of Sugar.

	Season.	Stock at the commencement of the season.
		Bags.
64.	1930-31	*Nil*
	1931-32	*Nil*
	1932-33	*Nil*
	1933-34	*Nil*
	1934-35	3,025
	1935-36	228
	1936-37	21,998

65. At the factory premises we have 4 large water and air tight sugar godowns with storage capacity of about 500,000 maunds of sugar. Besides we have out-station godowns, as under:—

Town.	Storage capacity of godown.
Bombay	15,000 x 2 cwt. bags. and sales depôt of 15,000 x 2 cwt. bags.
Calcutta	15,000 x 2 cwt. bags.
Karachi	15,000 x 2 cwt. bags.
Madras	15,000 x 2 cwt. bags.
Nagpur	12,000 x 2 cwt. bags.

Yes, two years back we increased our storage capacity by 100 per cent. and we will further increase it if we feel it necessary.

66. According to our experience of last year and the adequate arrangements we have made to protect sugar against moisture, we can say that our sugar does not deteriorate.

Generally speaking the causes of deterioration are (i) affinity of sugar for moisture and (2) improper and inadequate storage arrangements. The impure product of the low quality is more susceptible to damage by sweat by moisture than pure hard crystal product.

67. As answered under Question 66 we experience little damage to the sugar, if there is any we recondition it and do not sell damaged sugar.

68. The extent to which the keeping quality of sugar can be improved is as under:—

It should have the highest obtainable polarization, low moisture contents, *i.e.*, 0·03 per cent. and low reducing sugar 0·05 per cent. In other words the final product should be as pure as possible and should have regular crystal.

69. According to our experience in the previous year about 0·025 per cent. sugar is damaged while in transit by rail or rail-cum-steamer route. The damage is due to (*a*) unsuitable type of railway wagons (*b*) lack of proper care on the part of the railways to handle the sugar consignments (*c*) in some cases unloading and loading at transhipment stations in rain, (*d*) sometimes letting sugar consignments lie in the open platforms in the rain, and (*e*) loading sugar at transhipment stations into dirty coal wagons.

70. Yes, mostly we find it difficult to obtain the required number of wagons for transportation of sugar and for this reason there has been delay in delivering the sugar in time in several instances.

71. Yes, the sugar being an important and delicate food stuff, its transportation must be improved on hygienic lines. The railway administrations must pay proper attention to the safe carriage of this product and *water and airtight wagons* must be provided for its traffic, furthermore there must be *watertight sheds* on the transhipment stations sugar should be transhipped in clear wagon not filthy and dirty with coal, etc.

	Season.	Average price per maunds at ports. Rs. A.	Average price of maund in up-country centres. Rs. A. Rs. A.
72.	1930-31	...	8 15 to 9 9
	1931-32	...	8 14 to 9 10
	1932-33	...	8 12 to 9 6
	1933-34	9 0	9 4 ...
	1934-35	8 9	8 10 ...
	1935-36	8 2	8 0 ...

Market.	Railway freight per maund *via* cheapest route.
	Rs. A. P.
1. Amritsar	1 6 2
2. Ahmedabad	1 6 6
3. Ambala	1 1 1
4. Ajmer	1 6 5
5. Bombay	1 0 0
6. Cawnpore	0 13 8
7. Calcutta	0 13 8
8. Cocanada	1 0 6
9. Calicut	1 2 4
10. Cochin	1 2 10
11. Delhi	0 14 11
12. Dacca	0 14 11
13. Jullundur	1 4 7
14. Katol	1 10 1
15. Karachi	1 1 0
16. Lahore	1 7 5
17. Majitha	1 6 7
18. Madras	1 0 6
19. Mangalore	1 3 6
20. Nagpur	1 8 7
21. Peshawar	2 1 4
22. Rawalpindi	1 13 7

सत्यमेव जयते

Capital Account and overhead charges.

73. The book value of property as it stands on 30th September, 1936, is given below:—

(i) *Leases and concessions.—Nil.*
(ii) *Lands.*—Land is leased out from Saraya Estate on yearly rent.
(iii) *Buildings.*—Rs. 7,11,577-4-4.
(iv) *Plant and Machinery.*—Rs. 41,66,441-8-5.
(v) *Other assets.*—Rs. 19,28,426.

74. *Particulars are as under:—*

1929-30.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
83,134 7 11	93,416 3 8	1,25,478 15 11	1,37,483 7 8	2,88,332 11 0	3,05,039 13 0

Following is the comparative table of the rates of depreciation allowed by Income-tax Department and those written off by us:—

	Rates written off.	Allowed by Income-tax Department.
	Per cent.	Per cent.
Machinery	6¼	6¼
Building	5	2½
Siding and Wagon	10	5
Tools and Plant	10	5
Electric Installation	10	7½
Furniture	7½	5
Live Stock	10	only allowed on death in full.
Cars and Trucks	15	15
Library Books	5	Do not allow.

Income-tax Department deal very strictly with depreciation written off, and the rates allowed by them are very conservative. They do not even give fair chance to the assessee within the Income-tax rules, rates in which however, are also very strictly provided so far as the depreciation according to our own views and calculations.

75. All the profits of the previous years were utilised in the extension of the factory and other improvements required to bring it up to the present capacity and efficiency. Thus no reserve fund could be created. When, however, the time came for creating such fund after the extended factory commenced working in 1934 a heavy excise duty was imposed on the industry and the amount with which reserve fund had to be created was given away as excise duty each year.

76. Ours is a partnership concern so this question does not arise in our case.

77. We raise our working capital by arrangements with the Bank, which allow us 75 per cent. on the value of stock, pledged at an interest on the bank rate.

78. The business is managed by the partners themselves. So this question does not arise in our case.

79. An agricultural industry as the sugar industry is must be assured of a net income of about 15 per cent. on capital in normal years, otherwise the industry will not be able to face the years in which the crop is bad, eventually partly or totally destroyed.

Efficiency of production.

80. Answer will follow along with the forms.*

81. Will be answered along with Question 80.

82. Where the Saraya Sugar Factory as well in staff as in consumption of the materials—oil, sulphur, lime, etc., is fairly up to the low limit, further improvement in the works costs can only be obtained by further increasing the capacity of the factory and improvement in the recovery rates. It is, however, very much the question if it, at the present level of the sugar market, will be a paying proportion to buy the machinery necessary little more improvement of the recovery. With the present installation very little more improvement can be expected.

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* Not printed.

Marketing.

83. Bombay, Cawnpore, Calcutta, Karachi, Madras and Nagpur.

Prior to season 1934-35 our sugar was also sold in Punjab side markets such as Delhi, Ambala, Jullundur, Amritsar, Rawalpindi, Peshawar.

84. (*a*) The manufacturers usually have their selling agents, and sales to the dealers are made through such agents. In some cases the manufacturers make local cash sales to the dealers direct.

Since, 1934, however, we have started out-station godown to sell the sugar direct to the retailers and big consumers, and this system has been followed by a few other manufacturers.

(*b*) Sugar dealers in big market towns and port places usually have their constituents in the up-country markets. These sub-dealers import sugar in their respective town through their "Artias" (the big market dealer), and distribute this amongst their retailer clients in their respective towns.

85. Yes, the *present* Indian Sugar Mills Association Contract Form No. 1 is suitable in the broad lines, but will have to be adopted to the local circumstances in some markets.

86. We are not able to answer this question, which can only be answered by the big sugar merchants as Rally Brothers, Volkart Brothers, Birla Brothers, Bhiwandiwala, Haji Abdul Haroon and others.

87. Our answer is the same as in case of Question 86.

88. We have no first hand knowledge about this.

89. We don't expect that Indian sugar which in quality is up to the Java standard will deteriorate more rapidly than the Java sugar itself. The lower grades have no good keeping quality.

From the last two years a fair number of factories are making sugar which is certainly up to the Java standard and we expect that every year more factories will follow suit.

90. The Java sugar was, and is perhaps still, preferred to Indian sugar by Hotels, Restaurents, Refreshment Rooms and Aerated Water Companies on account of its regularity of grain and good colour. Where from the statistics it is known that in the last months hardly any Java sugar has been sold, it seems that the good quality Indian sugar has replaced Java sugars.

91. As already answered under Question 90 we consider that a fair percentage of the Indian-made sugar is as good in all directions if not better than the average Java sugar. The rest of the sugar is inferior so far as concerned purity, grain, and colour.

92. Up to the year 1934 it was the custom that the sugar stocks as far as possible were removed from the factories, and it must be assumed that the stocks were carried by the dealers and speculators. As the situation now is, where no dealer is buying otherwise than hand to mouth, it must be assumed that the factories are forced to carry the stock.

The stocks are usually financed by the bank up to 75 per cent. of the market value, and interest is charged according to the individual arrangements.

93. Yes, but it depends to some extent on the terms of reference which the survey would have to follow.

94. Yes, but please *vide* our answer under Question No. 19.

95. Standardization is absolutely necessary and is bound to come in a natural way. Every year a certain number of factories are making the changes necessary to enable them to make a sugar which in colour is equal to or better than the Dutch Standard No. 25, and we will finally come so far, that all factories without any difficulties are keeping up this standard. According to the demand in the market this colour-grade of

sugar will then be made in different sizes of grain, probably bold, medium and fine.

Considering the differences in quantity of good grade Indian sugar in 1935-36 and 1936-37 it seems that it will not be long before all factories in India are making sugar of sufficient good colour, but it would possibly be a good plan to accelerate this process by fixing *one* colour standard equal to the Dutch Standard No. 25.

On the present moment it seems that some of the good factories are going to introduce a fairly new process for making white sugar which will result in a quality of sugar nearly equal to refined sugar, if this is done, it will induce the other factories to do their upper best to better their quantity of sugar.

Our expectation is that within two or three years all the Indian sugar factories will make sugar equal to Java sugar, and some of the factories are going in for semi-refined or even refined sugar.

96. (*a*) No business has been done by us on basis of those standards.

(*b*) Not by us.

97. It is very difficult to make any suggestion as to improve the usefulness of the present series of standards, because we have the feeling that most of them are not wanted at all. Up to some few years ago the Indian sugar merchants were used to buy their sugar on the basis of the Dutch Standards, which are also used on many other places of the world, and they were for white sugar quite accustomed to the D. S. S. No. 15.

Where all sugar, which can't be classified as a white sugar, here in the Indian market always is bought on sample, and this custom has not stopped, the necessity of all these different standards is not felt. We therefore also think, that it would be sufficient to have only one standard which represents the minimum sample of sugar which has to be accepted as white sugar. As concerns grain a classification is bold, medium and fine would do.

It is totally useless to try to force a certain number of standards on a market in which the *buyers* are not willing to accept them. As a matter of fact, the demand for certain standards must be come *from* the market, this is the normal course.

We don't see that there is any reason to press too much on all those different standards of lower grade sugar. In a nutshell it comes to that; all the Indian sugar mills are provided with machinery suitable to make white sugar, therefore all the factories will have to learn to make it up to a certain minimum standard, which is acceptable to the buyers, if possible even better quality is made. All the sugar made, which don't reach this standard, will be considered as inferior and buyer can refuse it or claim a certain reduction in price.

98. To our knowledge no sugar producing country, which is not engaged in *export or import* trade has a terminal market. Nevertheless we consider a terminal market on the right lines will be useful.

99. We estimate that the normal consumption of India is about 1,200,000 tons a year. We expect, that by these low prices the consumption will increase the magnitude of the possible increase we are not able to estimate.

100. We have diverted this question to our agents and their answers are:—

Bombay.—In our opinion factory sugar is not replacing gur in the sweetmeat trade if at all it is only to a very small extent.

Karachi.—In sweetmeat trade in Karachi, gur is not now used. You see that the informations are very different, here on Saraya quite an amount of sugar is used in the sweetmeat trade. All over surely a certain amount of factory sugar is used for the sweetmeat trade, we are not able to estimate to which extent.

101. We are not able to answer this question, this could eventually be found out from the customs duty statistics.

102. We are not able to answer this question, which we have forwarded to our agents, their answer will eventually follow.

103. No information have reached us hereabout.

104. A small amount of our sugar has yearly been used by a Bombay Chutney maker, and has in that way been exported to England.

After that the Government has agreed to the most unfair proposals put forward by the recent sugar conference in London there seems to be no possibilities of export out of India at the present.

105. As far as we can see the only effect has been that the cane price has gone down and that the manufacturer is earning less. The addition in the excise duty this year has taken the last rest of gain away from the manufacturer, the present sales prices at Rs. 5-12 and Rs. 5-10 are far below the price of production.

106. There are strictly speaking no arrangements for the marketing of molasses, certain amount is sold through brokers of the vicinity and about 90 per cent. to the Indian Molasses Co.

107. As far as we understand all the Indian molasses bought by the Indian Molasses Co. are exported to England.

The Indian Molasses Co. has difficulties with the export at present it is difficult to say, if there are any possibilities of development of export.

Claims for protection.

		Rs.	A.	
108.	Sugar	9	1	per cwt. from April, 1932.
		9	4	Ditto March, 1937.
	Sugarcandy . .	10	8	Ditto February, 1934.
	Molasses . .	31	8	per cent. *ad valorem* from April, 1932.

An elaborate reply to this question is expected in the consolidated reply from the Indian Sugar Mills' Association. The fact is that nothing is so manifest in itself as the effect of the measure of protection in the case of Indian Sugar Industry. The rapid progress made by the industry since imposition of the protection duty has been unique, and not only India has become self-sufficient in its sugar than before, but also it is on the verge of finding foreign markets for its product. This staggering progress of the industry has played an important rôle in the Indian National economy. The enormous amounts (about 16 crores of rupees) of money retained in the country by cutting the import of sugar has been distributed amongst the cultivators, the manufacturers and a large number of the Indian graduates skilled and unskilled labour and the carrying companies.

To be brief the industry has given employment to over 200,000 workers, about 2,500 graduates in science and engineering, arts and commerce, 10,000 educated persons belong to the middle class, has given over 20 million agriculturists a cash crop—cane, has created field for investment of the Indian capital to the extent of Rs. 30 crores, and cane cultivation has increased from 3,076,000 acres to 4,232,000 acres (season 1936-37). The number of factories increased from 29 to 157 and further 14 factories are under erection for working during season 1937-38.

From the above few lines it is evident how enormously the protection has been effective and beneficial to India.

109. In view of progress made by the industry under the plan of protection, and the fact that an enormous amount of national capital has been invested in the industry, it is absolutely necessary to continue protection, at least to such an extent that importation of foreign sugar becomes an

impossibility. The previous year's experience has shown that the consumer has not to suffer the consequence of the protection, on the other hand he has been benefited by a lower price.

To mention a figure is not possible in an off-hand way. For this analysis of the actual statistical figure is very essential, and we leave this part of question to be dealt with properly by the Indian Sugar Mills' Association.

110. (1) Legislative action to prevent further uneconomic expansion of the industry in British India as well as in the Native State.

(2) Facilities in improvement of quality and quantity of cane yield per acre.

(3) Transport facilities of cane from the country side to the mills by improvements of roads and other means of communication.

(4) Facilities for acquiring sufficient land for the purpose of cane cultivation for the factories on short lease basis.

(5) Establishment of single selling organisation or statutory powers to the Central Marketing Board.

(6) Facilities for exportation of the surplus sugar and reduction in the rail and steamer freight to ports of destination.

(7) Establishment of Research Institutes under joint control of the Government as well as the industry.

The reasons for these proposals have all been given in the answers of the preceding questions.

111. The import duty was imposed at a moment at which the production of molasses here in India was fast increasing and consequently the prices decreased; we don't think that this duty has had any effect nor has harmed any industry.

The Pipraich Sugar Mills, Ltd.

1. Our factory started work in 1932 with a capacity of 150 tons which has now developed to 300 tons.

		Total production.	No. 1.	No. 2.
2.	1932-33 . . .	53,362·57	29,836·3	23,526·2
	1933-34 . . .	80,054·0	51,677·1	28,376·9
	1934-35 . . .	71,579·5	46,837·5	24,732·0
	1935-36 . . .	95,190·0	64,205·0	30,985·0
	1936-37 . . .	121,425·0	85,842·5	35,582·5

3. (*a*) Yes. Our factory is advantageously situated in respect of cane supply. As regards other materials we are rather far off.

(*b*) Facility of road and other communications requires special attention. The road communication in itself is insufficient and whatever there is it is not kept in proper repairs and then the worst of it is that repairs are made very late after half season is over.

(*c*) No complaint about labour supply.

4. Single sulphitation is the process of manufacture.

Carbonitation process is a bit expensive, but it improves the quality of sugar in colour, lustre and keeping quality. The yield is also higher.

5. Our factory was a 150-ton plant originally in 1932-33. In the next year it was developed into a 250-ton plant by adding 6 rollers, one mill engine, two boilers and four centrifugal machines, one pan and one juice heater, and now it is a 300-ton plant. This extension cost us about Rs. 1,25,000.

6. Addition of fourth body to the evaporators is under contemplation.

7. The question of main factors which determine the size of an economic plant is a very wide problem and cannot be expected to be thrashed by a lay man, but we will give our opinion based on the experience of our short working—

(1) The amount of cane supply which can be had fresh from the fields within 12 hours.

(2) Minimum overhead charges.

(3) Good extraction and low percentage of loss in bagassees.

(4) Economy in the consumption and supply of fuel.

(5) Nearness in the market for its product.

(6) Outlet for by-products.

(7) Amount of capital available.

In our opinion of 500-ton plant is most economical in the congested area, or a small plant of 50- or 60-ton in the unexplored area, where cane can be grown, with the special concession in the minimum price of cane which should be fixed on the limit of open pan factories.

In this very connection it may be noted that small plants of up to 300 tons cannot revive in the present day market conditions, unless they are exempted from the operations of the rules about minimum price. In our opinion these factories should be classed with open pan factories as regards the minimum price of cane.

8. Only insignificant parts which cannot be said to be the special parts of the sugar machinery.

9. We have no complaints.

10. Yes, we undertake cultivation of sugarcane and have taken the land on lease. No difficulties in leasing the land except that zemindars have charged very high rate of premium, which comes to almost the price of the land.

11. (*a*) Total area taken on lease is about 2,500 acres.

(*b*) At present 600 acres are under cultivation but expected to be 1,200 acres within 2 or 3 years.

(*c*) Co. 213, 259, 285, 312, 331, 393 and 290 are grown.

(*d*) *System.*- Cane is generally grown in trenches of 2 ft. apart. Four years rotation: 1st year vergin crop, 2nd year ratoon, 3rd year fallow and wheat, and 4th year fallow and then again cane in 5th year.

(*e*) *Manuring.*—Green manuring, cow dung manure, castor cake, sulphate of ammonia, sulphate of potash, super phosphate, press and ashes press mud and molasses.

6. The details of cost of cultivation are given below:—

	Per cent. Rs.
Green manuring and preparation of fields . . .	9
Trenches	6
Manures	40
Seed	15
Irrigation and hoeing, etc.	24
Earthing	8
Harvesting	10
Rent	6

12. 5 acres for experiments and 10 acres for seed.

13 Co. 331 tried in experiment. It proved utter failure as regards sucrose but very abundant in yield. It is a late variety which ripens in

February and can stand up till the end of May, but the pest of borers affects it after March. Co. 393 tried. It is a crop of tenure of 213 limit, is a bit poorer in sucrose and more liable to damage by pests and diseases.

Co. 312, 285 and 290 tried. They are early crops which ripen in November and stand up till the middle of February. They are all equal in sucrose contents except 290 which is a little better, in sucrose but more liable to disease.

On the whole Co. 213 has proved the best from all round point of view. Castor cake mixed with sulphate of ammonia and potash has given good results in ordinary land, whereas in jungle land sulphate of potash, superphosphate and press mud ash have proved efficacious.

14. The area under cane has been constantly increasing so much so that it has surpassed the requirements and has resulted in overproduction of sugar. The quality of cane has also been improving so much that the average purity of mixed juice for the season in the last season has grown up to 85·52 against 82·24 in the last year.

15. 20 per cent. of the average estimate of percentage of loss through frost disease or insect pest. If the cane is finished by January the damage of frost disappears.

16. Yes, our factory is assured of a sufficient supply of suitable cane. Co. 213 and to some extent 312 are generally crushed in our factory. The average yield of the farm should be about 22 tons per acre in the first crop and its half quantity in the ratoon.

17. No complaint of competition in the last season. In the previous of course the competition has caused an average rise of about 10 per cent. over the minimum price fixed by the Government. The competition generally started from February.

18. (*a*) Yes, in the last two years the area under cultivation has gone up by leaps and bounds.

(*b*) The rise in the area under cultivation is due to the increase in the number and capacity of the mills and the higher demand of cane. Excess in rainfall stunts the growth of cane and brings various sorts of diseases. Defects in rainfall does not allow tilling and involves greater expenditure in irrigation.

(ii) The prices of cane depend on the prices of sugar which if higher tempts the cultivators to concentrate all his energies in cane cultivation and when the prices of sugar go down resulting in fall in the price of cane, the cultivator thinks twice before he decides about the area of cane cultivation.

(iii) The same as in the case of price of sugar.

(iv) So far the cane cultivation has proved more lucrative than any other crop.

19. Certainly the production of cane in 1936-37 has been much in excess of the requirements. We think Government would be well advised in the interests of the poor cultivators if the area for cane cultivation is fixed by the Government for every tahsil according to the requirements of the mill.

20. An ordinary cultivator's cost of production of cane comes to about Rs. 57 per acre (preparation of field Rs. 4, Trenches Rs. 3, cow dung manure Rs. 7-8, seed Rs. 10, irrigation Rs. 18 and earthing and hoeing, etc., Rs. 10 and rent Rs. 4-8 and his outturn is about 300 maunds per acre.

21. The main difficulties of a cane grower are shortage of funds, means of irrigation and means of transport. The last named is much important, because sometimes it has proved so taxing that a cultivator pays to the cartman half of the price of the cane. If tram line facilities are given by the Government to the factories in the form of advances to be realised in instalments like land revenue it will prove very efficacious. Cultivators should be given taqavi for pneumatic-tyre bullock carts.

22. (*a*) We still agree with the previous Tariff Board's conclusion about compulsory acquisition and leasing of land.

(*b*) Yes, we are in favour of zoning system. This should be fixed according to the capacity of the mills and the factories should be made responsible for improvements in their respective zones for which work Government should also contribute, but the prices of cane should be left to be settled mutually between the cane-growers and the manufacturers with the safeguard that in case of difference of opinion, an arbitrator should decide.

23. In case of 20 per cent. on the probable yield of the fields, out of which 5 per cent. should be in the form of seed, 5 per cent. in the form of manure and 10 per cent. in cash, for which Government in the form of manure and 10 per cent. in cash for which the Government should take the responsibility of getting it realised.

24. Yes, we are in favour of fixation of a quota for sugar manufacture by factories, if the need arises.

(*b*) Licensing of new factories and extension of existing factories. The main reason for this is the overproduction.

25. We depend mostly on gate cane.

26. Out of five seasons that we have worked, in the last season we did not take any rail cane because the cane in our locality was more than sufficient to meet our demand. In the previous four seasons the proportion of gate and rail cane was as follows:—

	Gate cane. Per cent.	Rail cane. Per cent.
1932-33	82·8	17·2
1933-34.	93·0	7·0
1934-35	87·6	12·4
1935-36	87·5	12·5

27. The gate cane is entirely transported by carts, the average cart load being about 20 maunds. The rubber-tyred cart can be substituted for ordinary carts, but it requires a regular propaganda and if taqavi advances are made by the Government and factories, we think 25 per cent. cartmen or even more will substitute rubber-tyred cart at once, and we have found that with a good pair of bullocks it can take about 60 maunds load.

28. Mileage of roads is very insufficient and the condition of the roads are not good at all.

29. The cane is brought by road from a distance of up to 15 miles and the average time taken between cutting and delivery at factory is never less than 36 hours. The cane is not protected at all in transport. The average cost of transport is one anna per maund up to 6 miles and anna 1 and pies 6 per maund up to 10 miles, above which it is 2 annas. The cane-growers employ their own carts, which is about 25 per cent. and 75 per cent. cane is borne on hired carts.

30. *Nil.*

31. We issue daily cart passes according to our requirements, and the carts are emptied at our gate within 24 hours. This is the improvement that we have made otherwise the carts would have had to stay for three or four days. We have provided a big yard for the carts and have engaged a special staff for distributing the cart passes in their various circles.

32. We are not taking rail cane now.

33. Basis of railway freight is on mileage per wagon of various sizes. Flat rate is desirable.

34. The rates are still high and require more reduction by about 25 to 40 per cent. There is always difficulty in getting empties in Bengal and North-Western Railway. This requires special attention.

35. No tramway service.

36. Tramway service is advantageous. We cannot say about the difficulties as we have not tried it so far.

37. The deterioration in transport by road is about 10 per cent. if delivered at the gate within 24 hours and by rail it is about 15 to 20 per cent.

38. All our cane is purchased from cane-growers.

39. Yes, about 25 per cent. of our supply we make advances to the cultivators, in the form of cash, seed and manure and get into agreement with them for taking their whole cane.

40. We purchase direct from cane-growers now.

41. No.

42. Payment is made just after the cart is unloaded within two hours in the day time. No payment is made in the night after 8 P.M. The supply of the night time is next morning.

43. The prices of cane have been—

	Per maund. As.	 P.
1932-33	5	7
1933-34	5	5
1934-35	5	9
1935-36	5	8½
1936-37	4	4

The prices tend to vary towards the closing of season according to the law of amendment and supply.

44. The formula of price worked out by the Government is on the relation between prices of sugar and sugarcane.

45. We cannot give any opinion about this question.

46. The minimum price of cane is fixed by the Government on the basis of a definite formula and there is no definite system for the excess price paid. It all depends on the competition between various mills.

47. Yes, we have paid prices for cane in excess of the minimum rate in the previous years but not in the last season. It was all due to low supply and higher demand which caused competition between various mills.

48. In fixing the minimum price the amount of duty should be excluded from the sale price. The price of cane should be fixed with a relation to cost of production of cane.

49. We think bonus system is advisable for early and late varieties.

50. Duration of crushing season has been—

	Days.
1932-33	179
1933-34	176
1934-35	136
1935-36	163
1936-37	173

The period of working is sufficiently long no doubt and it could be reduced in view of economical working, but on the other hand we have to consider the expenses that have to be borne in the off season.

51. The possibility of extending the crushing season is simply overproduction, which cannot be justified unless there is an outlet for Indian sugar.

52. We have no complaints.

Labour.

53. 87 skilled and [illegible] unskilled labourers are employed in the crushing season, whereas 27 skilled and 55 unskilled are employed in the silent season.

54-55. We have not imported skilled labour at all from abroad or other parts of India.

56. We provide quarters for labourers, have got dispensary, and provide recreation.

Power.

57. Bagasse is not sufficient for the requirements of mills, and we have to supplement it by wood. Hence no surplus and no baling.

The amount spent of fuel have been:—

	Rs.	A.	P.
1932-33	2,997	9	0
1933-34	5,071	11	6
1934-35	6,424	2	0
1935-36	5,877	15	0
1936-37	7,552	0	0

58. No by-products except molasses.

59. No figures available.

60. The market for our molasses is Bhairab Bazar (Bengal) it is transported by rail. The freight rates are annas 10-5 per maund.

61. We sell our molasses generally. It can be used as manure but it requires a regular investment and propaganda work to get it introduced. The only utilisation of molasses, which can be profitable, is to use it for manufacturing power alcohol, which cannot be done without Government legislation for mixing a certain proportion of power alcohol with petrol.

62. We got no surplus bagasses.

63. No.

64. November, 1933—1,017 bags; November, 1934—4 bags; November, 1935—*nil;* November, 1936—5,867.

65. We have got godown for sugar stock which has got the storage capacity of 15,000 bags. This year we have converted other buildings into temporary godowns.

66. Our sugar does not deteriorate except by climatic conditions in the monsoon, which affects it so badly that it loses by about 25 per cent. in price.

No. II sugar deteriorate still worn.

67. The damaged sugar has been sold so far and not reconditioned.

68. There is still a margin for improvement in the storage of sugar.

69. The damage in transit has not been appreciable.

70. Lot of difficulties have ever been experienced in getting wagons, so much so that sometimes orders have been cancelled and heavy losses have occurred. There has been no complaint of delay in transit.

71. No suggestions for the type of wagons.

72. We make no difference in prices of ports and up-country centres. Our prices are all f.o.r. mills. Hence we can't say about the price at which our sugar is sold at the ports and the up-country centres.

Capital Account and Overhead Charges.

73. Copies of balance sheet are enclosed.

74. Balance Sheet will say.

75. No reserve.

	1932-33.			1933-34.			1934-35.			1935-36.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
76.	2,291	12	3	43,612	12	3	44,182	4	0	45,011	6	0

77. The working capital is provided by opening cash credit account with Banks at 4 per cent. interest.

78. Balance sheet will say.

79. 10 per cent. dividend is a fair return on the capital invested.

80. Balance sheet will say.

81. There appears no room for further reduction in the overhead charges, but in recovery there is still a margin by improvement in quality of cane and getting cane fresh from the fields, and reducing the loss in bagasse and molasses.

Marketing.

83 Our marketing centre is at Cawnpore. We have got sole Agents for the whole produce of our sugar and the sugar is sold by them on our behalf, for which they are paid the commission of Re. 1-8 per cent.

(*b*) We cannot say anything about the arrangement between dealers and retailers.

85. Yes, the present sugar contract form is suitable and we have no suggestions to offer.

86 to 89. We are not in a position to say.

90. Java sugar is preferred by a particular class of consumers, who will not use any sugar but Java, otherwise Indian sugar is as good as Java for consuming purposes.

91. Our sugar of most factories is decidedly inferior to Java sugar in brilliance and size of crystal both as well as in keeping quality, whereas the sugar of some factories is as good as Java.

92. In previous years, we think two-third of the stock was stocked by the dealers and one-third by the manufacturers, but the dealers now refrain from stocking altogether. The carrying of stocks is financed by the Bank.

93. Marketing survey of the sugar industry will not only be advantageous but we think in view of the present conditions it is an absolute necessity.

94. There could be no two opinions about the necessity of a central All-India Selling Organization.

95. The standardisation of sugar is not to be questioned, which can be based on colour and size of grains.

96. *Nil*, we have not done any business on the basis of sugar standards.
97 & 98. No.

99. We have to depend on the estimates prepared by the Sugar Technologist. Propaganda for sugar consumption on the lines of Tea Cess Committee will help a lot in the increase of sugar consumption.

100. So far sugar has not replaced gur appreciably in sweetmeat trade and if it has done at all it is not more than 10 per cent.

101. Having no experience we refrain from commenting on the point of subsidiary industries, but this much we can say that if the Government encourages it, the sweetmeat trade might be taken up as cottage industry which will be a great relieving measure for the unemployed.

102 & 103. We are not in a position to reply.

104. There has been very little export of Indian sugar so far, which is not feasible unless the Government gives to India the same privilege

as to other colonies for import in its own countries, and it is very lamentable that this question has been passed over in the recent Sugar Conference by giving concessions for Burma only.

105. Sugar Excise Duty has proved simply killing and much ruinious. It would no doubt have had a salutary effect if there was any marketing organisation.

106. There is no marketing arrangement for molasses. Lately a Molasses Company has been started for sufficient to make any appreciable improvement in the prices of molasses. We think it is only reaping the undue advantages of the pricelessness of molasses.

107. We are not in a position to reply.

108. The protection given by the Government to Indian sugar by imposing import duty on foreign sugar has been most effective and it has been the result of this protection that the Indian money has come out in such great abundance for sugar industry. We know instances in which the widows have sold their ornaments and have invested in this industry. The money of so many orphans has been put in sugar industry. This is the result of protection. But alas all these hopes have been frustrated by the imposition of excise duty. Nothing more has to be said.

109. To continue protection to a greater extent, *i.e.*, by imposing higher duty on import of foreign sugar is an absolute necessity, because most of the money invested has not paid itself as yet, but at the same time this is also extremely essential to control the sale price of sugar otherwise the protection will not give the expected gain. At this stage we have no hesitation is saying that when the Government has fixed the minimum price of base, *i.e.*, cane, there is no reason why it should not fix the sale price. This ruin of the sugar industry has been mostly due to this legislation of cane price. The manufacturers have been tied hand and foot and the consumers have been let loose to play at the cost of the manufacturers, which can have no justification whatsoever. The growers also are losers.

110. Control of price of sugar by the Government or a Central Marketing Organization is the only form of existence for the industry besides the protection duty.

111. We are not in a position to say.

The Shankar Sugar Mills, Gorakhpur.

1. The factory started crushing in 1934. The factory grinds about 800 tons per day.

	1934.	1934-35.	1935-36.	1936-37.
2.			Mds. Srs.	Mds. Srs.
	..	..	269,207 20	327,500 0

3 (*a*) Fairly good situation.

(*b*) Railway station and katcha roads all round going to interior.

(*c*) Fairly good.

4. We agree as replied in your Circular No. 67 of 1937.

5. We have added:—

1. One air compressor.
2. One sulphur furnace.
3. Two filter presses.
4. Three centrifugal machine.
5. One sugar melter.
6. One magma pump.

7. One seed mixer.

8. One spray cooling plant.

6. (1) Three centrifugal machines.

(2) One sugar elevator.

(3) One sugar cooler.

(4) One sugar crader.

7 & 8. We agree as replied in your Circular No. 67 of 1937.

9. (1) & (2) Yes.

10. No.

11 & 12. Does not arise.

13. No experiment has been tried.

14. (*a*)	1934.	1934-35.	1935-36.	1936-37.
	Mds. Srs.	Mds. Srs.	Mds. Srs.	Mds. Srs.
	1,349,232 20	1,677,629 30	2,758,374 0	3,329,027 30

15. No.

16. The cane supply has been increasing since 1934 and now sufficient cane is grown, mostly the cane is of 213 variety. Field yield is approximately 300 maunds per acre, sugar yield.

17. Till the year 1935-36 enough cane was not grown in the area to meet the crushing capacities of the factories. Hence was the competition and prices used to be increased.

18. Not much. Only the area under cane cultivation has increased.

19. The production is much in excess of the requirements of the area some restriction may be helpful.

20. Not available.

21. The transport roads are very poor.

22 to 24. We agree as replied in your Circular No. 67 of 1937.

25. (*a*) About 80 per cent.

(*b*) About 20 per cent.

(*c*) Does not arise.

26. Entirely transported by carts, average weight of cane per cart is 15 maunds. It is possible with a great advantage to substitute rubber-tyred carts. These generally carry over 30 maunds.

27. Not adequate. The main as well as feeder roads both in worst possible conditions.

28. Generally cane is brought to factory from within 7 miles radius. Average time taken to reach factory is 12 hours. No protection from deterioration is yet applied.

29. Cannot say.

30. No.

31. Since the middle of the last session we have introduced *purjee* system to carters direct. Normal period of detention in factory period is 12 hours.

32. From within 50 miles. Average time taken is three days at least. Arrangements of railway transport needs much improvement.

33. The railway freights are charged a fixed sum for the wagons according to capacity within a certain distance. There was some temporary reduction of railway freights towards the close of the passed session due to large quantities of cane standing in field in distant places.

34. The railway freights should be reduced for raw materials, gunny bags, lime, coal, firewood, etc.

35. We have no tramways.

36. There are many difficulties in way of laying a tramway transport system.

37. There is quite an appreciable deterioration of cane due to delay in transport.

38. Most of the cane is purchased since past session direct from grower.

39. No arrangement till now.

40. Most of cane is now purchased direct from cultivators.

41. No.

42. Carts are weighed on cart weighbridges all 24 hours and payment is compulsorily made instantaneously.

43. Average price of cane—

1934.	1934-35.	1935-36.	1936-37.
Annas.	Annas.	Annas.	Annas.
5·099	5·343	5·441	4·204

The prices are controlled by Government and vary according to price of sugar.

44. The minimum price of cane is based on price of sugar.

45. Cannot say.

46. The price of gur has gone down considerably due to price of sugar falling down and consequently lower price of cane.

47. No excess price has been paid for cane in the passed session. Up to the session 1935-36 towards the close of the session higher prices for cane were paid due to less cane and therefore competition among local factories.

48 & 49. We agree to your reply in Circular No. 67 of 1937.

50.	1934 . .	15th January, 1934 to 20th April, 1934.
	1934-35 . .	23rd November, 1934 to 19th March, 1935.
	1935-36 . .	16th November, 1935 to 27th April, 1936.
	1936-37 . .	3rd December, 1936 to 25th May, 1937.

Statement.

Late started. The past session 1936-37 has been sufficiently long for economical working.

51. Enough cane rather more is anticipated for coming session of 1937-38.

52. Yes.

53 & 54. Occasionally Engineers and Chemists and Pan Boilers.

55 & 56. Some quarters are built in the factory compound.

57. Some extra fuel is required, firewood, coal.

	1934.			1934-35.			1935-36.			1936-37.			
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	
Firewood .	20,363	8	3	13,033	6	0	24,883	12	3	23,502	7	9	(Up to May)
Coal .	9,846	14	0	7,753	2	6	9,463	1	0	3,641	11	6	Do.

58. Molasses.

		Rs.	A.	P.
59.	1934	No sale.		
	1934-35	No sale.		
	1935-36	1,875	12	9
	1936-37 (up-to-date)	6,407	10	6

(Rate anna 1 per maund.)

60. Since last year we sell our molasses to Indian Molasses Co It is despatched to Semaria. The Railway supplies special tanks for Indian Molasses Co. Railway Freight annas 2 per maund.

61. We sell.

62. Does not arise.

63 & 64. We first spread logs of wood on floor and we place sugar bags on them. At present we have one godown 250′ × 65′ × 30′ and we can store 50,000 bags of sugar in it. We are intending to build another godown of 110′ × 65′ this year.

		Opening balance in the beginning of crushing season.	Closing balance on end of the crushing season.
65.	1933-34	*Nil.* Factory started on 25th January 1934.	*Nil.* 909 bags.
	1934-35	200	11,560
	1935-36	2	50,437
	1936-37	9,419	90,838

66. Only last year some 6,000 bags deteriorated. In other years we had not much stock. The causes of such deterioration are dampness of the floor and also moist atmosphere. The quality is also effected.

67. Generally first we try to sell the damaged sugar as it is. If the price does not suit we either remelt or redry as the condition be.

68. Seventy-five per cent.

69. About 15 percentage of sugar is damaged in transit during rainy season. This is due to carelessness in transhipment of the railway and also moist atmosphere.

70. During cane season there is great scarcity of empty wagons for loading sugar in Bengal and North-Western Railway. Also during off seasons, when there is fair demand of sugar in the market, we feel scarcity of wagons.

71. Generally the wagons supplied are often damaged and leaky. The railway should take care in keeping the wagons in fit condition to carry commodities like sugar.

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		Rs. A. Rs. A.
72.	1933-34	7 12 to 8 9
	1934-35	7 12 to 8 5
	1935-36	8 0 to 8 6
	1936-37	5 12 to 6 8

83. Our principal market is Bombay and Cawnpore, Central Provinces, Rajputana State Agency.

84. (*a*) Through our sole Agents Messrs. Indrachand Hariram, Cawnpore.

(*b*) Not known.

85. Sugar Contract Form framed by Sugar Mills' Association is suitable.

86. We have no statistics.

87. We have no information about retail.

88. Generally in small godowns apart from the damage due to humidity sulphitation sugar slowly loses its colour.

89. We do not think so. None to our knowledge.

90. Java sugar is preferred by high class Europeans and also some old people who are habituated to sugar.

91. Average quality is not equal, it is inferior both in colour and grain but it is rapidly improving.

92. Manufacturers have to carry the largest stock of sometimes even sold sugar nor unsold sugar on behalf of the purchasers and rarely big speculators also carry big stock in large towns. Majority of the manufacturers have arrangements with Banks whom they pay interest at slightly higher rate than the prevailing Bank rate. This is all of course against stocks held.

93. We consider this will be highly profitable to the industry.

94. Yes.

95. We think that mechanical standardisation of crystals should be enforced by proper standard grades, and calorimetric standards on these grades should fix the price consideration may also be made for the finish.

96. (*a*) None.

(*b*) No.

97. Fewer standards should be made on colour basis supported by mechanical crystal grading.

98. No.

99. Only idea we have is from others

100 & 101. Does not arise.

102. Already given.

103. No idea.

104. None.

107. No.

The Punjab Sugar Mills, Ltd., Gorakhpur.

General Questionnaire re Tariff Board Enquiry.

1. Started Refinery in 1921, and started cane crushing 1926; 600 tons.

2. Slips attached.

3. (*a*), (*b*) & (*c*) Yes.

4. Sulphitation.

5. About 3 lakhs; New water works, pan boiler, spray pump and spray centrifugals and pump, sugar driers, compressor engine, Dorr Clarifiers, oil engine, seedling crystalliser, Magma, knives, chimney, norit plant, mixers, screw conveyers.

6. New chimney, Dorr clarifier, and 2 presses.

7. (*a*) 500—600-ton plant.

8. Not much yet. All main parts have to be imported from manufacturers.

9. (i) Not much of the cases have arisen to test.

(ii) Sugar factories are very much handicapped for want of space. Zamindars prove very troublesome and create hitches every time to snatch concessions and pecuniary advantages. Industrial Department could move the local Government for full facilities for the factory.

10. Yes, we cultivate. We mortgaged land on account of troubles for cart standing and affluent water disposal. Cases are going on since last 15 years between the company and landlords.

11. (*a*) 25 acres, (*b*) 10 acres each year, (*c*) 213 Coimbatore, (*d*) Modern, (*e*) 400 maunds.

12. (*a*) 5 acres, (*b*) we are members of Cane Development Organisation.

13. Refer to No. 12.

14. (*a*) Cane has become abundant.

(*b*) Generally 213 Coimbatore.

15. 213 Coimbatore; Quality is pest resistant and can stand hard times.

16. Yes, 300 maunds to 400 maunds per acre.

17. In previous years on account of shortage the prices rose by 25 per cent. to 30 per cent. in the end of season.

18. (*a*) No.

(*b*) (i) If rains are plenty and timely, then sowings are heavy, otherwise there is shortage.

(ii) Sugar prices have gone heavily below.

(iii) No economical value.

(iv) Sugarcane is still a cash crop.

19. Yes. 10 per cent. reduction in sowing.

20. Rs. 20 per acre for manure and seed but no labour which is their own. 300-400 maunds per acre.

21. They require organisation to deliver cane at given times.

22. (*a*) Compulsory leasing for factory's use, for industrial purposes is very necessary.

(*b*) Yes, zone system is preferable.

23. In these days nothing is saved from sugar industry. Moreover, advances, etc., are very difficult to realise.

24. (*a*) Yes, to check overproduction.

(*b*) (i) Licensing should be started.

(ii) Extension should be with permission.

25. (*a*) 95 per cent., (*b*) 5 per cent., (*c*) *Nil.*

Cane has now developed, so supply is abundant.

26. Comes by carts weighing 16 maunds to 20 maunds. Roads are so bad that improved type of wheels would be of no use at all.

27. Very bad.

28. Cane comes from up to 15 miles.

29. 2 pies to 3 pies per maund per mile.

30. No.

31. 24 hours. Ticket system was used.

32. 15 to 20 miles.

33. Reduced rates will help the industry.

35. None.

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37. There is 10 per cent. deterioration by rail. By road long distances it is about 5 per cent.

38. (*a*) 80 per cent. directly from growers.

(*b*) 20 per cent.

39. In the beginning we did, but now we have stopped the system.

40. On contracted cane 1 pice per maund.

41. Yes, on the above terms.

42. 6 to 10 hours.

43. From annas 4 to annas 9. Prices rise in the end of seasons.

44. Now Government fixed prices have to be paid.

45. Now gur or khandsari have no bearing on the prices.

46. Gur has become absolutely unproductive on account of low prices of sugar.

47. Yes, on account of shortage of crop and mutual competition prices rose to double in the end of seasons.

48. No, compared with sugar prices it is high. Government fixes prices including duty amount as part of price, while it is an extra charge.

49. Does not esem fixable, the number of cane-growers are very large and the fields owned are very small in area. There is no Dig land [illegible] owning their own cultivation.

50. About 6 months. The period depends upon the prices of products.

51. With overproduction this question does not remain of any importance.

52. No practical help has come. It is a routine affairs now.

53. Engineering Department continues its work without stoppage. Manufacturing Department is off for 2½ months.

54. Local labour has been trained, otherwise working with imported labour becomes uneconomical.

56. Quarters have been provided.

57. Firewood and coal spent on fuel.

58. None.

59.	1929-30	Re. 1-6
	1930-31	Re. 1-12 Re. 1-1
	1931-32	Re. 1 to Rs. 10
	1932-33	0 anna to 6 annas.
	1933-34	In the case of 6 p. to 1 a. 4½ pies.
	1934-35	4½ pies to 1 anna.
	1935-36	1 anna to 1 anna 6 pies.
	1936-37	6 pies.

60. Railway facilities are not satisfactory.

61. Sometimes throw away. Yes, if alcohol is permitted and certain per cent. is mixed with petrol by Government Law.

62. Bagasse is now serving as a fuel. In most of the factories it would not save much, but if it can be saved and some industry is possible with profits, it will surely be welcomed.

63. There does not seem much chance of success.

		Beginning of the season.	End of the season.
		Bags.	Bags.
64.	1929-30	4,715	25,900
	1930-31	13,130	45,625
	1931-32	1,500	51,572
	1932-33	1,925	41,378
	1933-34	16,025	37,165
	1934-35	1,633	23,823
	1935-36	233	49,938
	1936-37	19,999	51,226

65. As now most of the stock keep lying so increased godown capacity is urgent. We have increased 12,000 bags godown capacity.

66. It does deteriorate to some extent. Dampness during rainy season is the chief cause.

67. We sell it at lower rates. It is not economical to recondition it.

68. If costly up to date arrangements are used and special constructions of airtight stores are made.

69. Dampness and rough handling during rainy season at changing stations.

70. On certain occasions, not always.

71. Air-tight.

73. Copy of Balance Sheet attached *Nil.* Association's letter.

		Rs.	A.	P.
74.	1929-30	78,709	0	0
	1930-31	81,728	10	6
	1931-32	82,868	1	1
	1932-33	86,634	10	2
	1933-34	66,992	7	10
	1934-35	91,131	15	9
	1935-36	94,243	11	6
	1936-37	about 90,000	0	0

75. Total amount Rs. 7,25,000 for seven years.

		Rs.	A.	P.
76.	1929-30	...		
	1930-31	72,597	14	3
	1931-32	1,49,596	4	0
	1932-33	1,54,087	6	0
	1933-34	1,92,600	0	0
	1934-35	1,92,600	0	0
	1935-36	74,020	6	10
	1936-37	...		

77. Through Banks against stocks at market rates from 4 per cent. to 8 per cent.

79. 10 per cent. to 12 per cent.

81. No reductions are possible. The work taken by sugar mills is very heavy and unless full repair and control is carried during off season, the next season it cannot properly work.

82. By investment in new machinery and making these up to date plant, but still with overproduction the economical question will remain unsolved.

83. Previously it was Cawnpore. But now ports have also come within purview.

84. Through brokers.

85. Yes, but nobody is acting upon that. The dealers are not prepared to give advance for sugar.

86. Excepting a profit of 1 anna per rupee by the retail sellers, there has not been greater difference.

87. No retail sellers are so many that none would tolerate others to earn heavy profits.

88. Dealers do not store much. They secure orders and indent directly from factories.

89. Indian sugar deteriorate earlier.

90. Now with such heavy difference in prices preference goes out of question. Of course some fanciful people may pay higher prices to satisfy their whim.

91. A good deal has come to Java standard.

92. (*a*) Throughout the year.

(*b*) They do not carry much stocks.

Banks godown clerks are at site. With sanctioned limits in Banks against stocks the business is carried on.

93 & 94. Yes.

95. All factories are not of modern equipments, so different grades and qualities must come out.

97. The question of increased corresponding cost will come in either in the form of low recovery or in the form of increased expenditure on machinery to equip with new sets.

98. Yes, with some central control over all Indian production, these suggestions of "futures" and terminal market can be helpful.

99. 71 lbs. per head. We don't think the consumption would go above 1 million tons.

100. Not much as gur will always remain less expensive and Indian masses being very poor, will always continue using it. Moreover the purchasing condition of the ryots is not improving yet.

101. Not much as gur will, a few may start, but it would remain insignificant. The masses cannot run into bottled or tinned goods. They have a prejudice against it.

103. Yes, imported sugar has been selling at unremunerative prices in order to keep pace with Indian sugar.

104. Very negligible amount. If Government provides facilities, a good deal of export is feasible.

105. 2nd excise duty of 1937 has proved the last straw on camel's back. It has ruined the industry.

107. Bengal and Assam generally consume it. It is not being exported.

109. Without protection it would be ruin of the factories, agriculturists and cane growers.

110. By providing facilities for export the Government can help to a very large extent in development.

111. Not much. Import duty has not helped much the molasses situation.

The Mahabir Sugar Mills, Ltd., Gorakhpur.

Replies to the questionnaires of Tariff Board.

1. Our factory started crushing and manufacturing sugar during the year 1932-33. The capacity of our plant is 400 tons.

2. The output of our factory for the last five years of different classes of sugar are given as under:—

	1932-33.			1933-34.		1934-35.		1935-36.		1936-37.	
	Mds.	Srs.	Chs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.
Grade 1	97,995	5	4	99,530	0	142,298	20	215,277	20	233,577	20
Grade 2	84,976	30	12	74,139	20	*Nil*		*Nil*		*Nil*	
Grade 3	*Nil*			*Nil*		*Nil*		*Nil*		*Nil*	

3. The factory is advantageously situated in respect of (*a*), (*b*) and (*c*), as we occupy a centre position.

4. (*a*) The process of manufacture of our factory is double sulphitation.

(*b*) In the sulphitation process, the plant is less expensive and the process is cheaper to work. On the other hand, the carbonitation process is more positive in its action, yields a higher recovery, and the sugar produced is of a better keeping quality. The principal items which raise the cost of carbonitation are limestone which has to be used to a quantity about 4 per cent. of the weight of the cane and coke. The determining factor will therefore be the distance of the factory from the quarries and the coal fields.

5. In season 1933-34 the factory added one pan, two crystallisers and four centrifugal machines to the original plant supplied by Messrs. Duncan Stewart & Co., Ltd., Glasgow. The amount spent on this addition was Rs. 1,17,500-6-6.

6. We are contemplating to add one evaporator, one Dorr clarifier, four centrifugal machines, Magma mixtures and pumps and a cooler for improving the efficiency and quality of sugar manufactured.

7. (*a*) The overhead charges of a factory decrease relatively per unit increase of crushing capacity. The larger the factory, the less are the proportionate charges on skilled directing staff, depreciation and certain factory operations. The size will ultimately be determined by the capital available, the availability of raw materials at a reasonable price in the neighbourhood and the facility of access to markets.

(*b*) The determining factors are the quality of cane and the duration of the working season. Generally speaking, for Northern India the minimum economic size is 500 tons crushing capacity and for Western India 400 tons.

8 Simple parts such as cast iron tanks and pipes and other plants comparatively easy to manufacture are obtainable in India. Generally speaking, sugar machinery is a specialised manufacture and has to be imported.

9. (*a*) & (*b*) Yes.

10. We have started cultivation of sugarcane in our farm. We have taken the land on lease. We tried to purchase the land, but the landlord did not agree to dispose of the same for ever and thus it had to be taken on lease.

11. (*a*) Total area of our farm is about 600 acres.

(*b*) This is our first year and have put about 100 acres under cane cultivation.

(*c*) We are growing Co. 13 this year.

(*d*) We are using chemical and cow dung manuring in this land, and the farming is on up to date lines.

(*e*) & (*f*) Cannot say as yet.

12. (*a*) & (*b*) & 13. This is our first year of starting the farm and so cannot say anything in these matters.

14. During the last five years the following changes have occurred which are worth noting.

(*a*) Deshi cane is replaced gradually by Co. 13.

(*b*) The acreage under cultivation and the maundage per acre have gradually increased. Thus the supply of sugarcane has increased more than what is necessary for our consumption. The quality has improved and the maximum recovery of 8 per cent. of sugar was considered very satisfactory seven years hence. Now the average recovery has gradually gone up to 9·5 per cent.

15. The damages to sugarcane in this locality is sometimes due to heavy rains and storms, and these things at times causing diseases in the fallen sugarcane. But for the last couple of years there has been no complaint of this nature.

16. Our factory is assured of sufficient supply of sugarcane. We generally get Co. 13 which has average sucrose per cent. cane varying from 11·8 to 12·5. Yield of cane in this locality is about 350 to 400 maunds per acre.

17. When the supply of cane is less and demand more the price at which it could be obtained under sugarcane rules is influenced, *i.e.*, goes up by competition of neighbouring factories.

18. The area from which we draw our supply has been subject to considerable variations depending on the price of sugarcane received by cane growers and the price of jaggery in the market. There have been very little variability as regards climatic conditions.

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19. The production of sugarcane in 1936-37 in our area has been in excess of our requirements and consequently a little restraint is necessary.

20. Sorry, we have no data.

21. Nothing.

22. (*a*) The last Tariff Board were against compulsory acquisition on the grounds (1) that it would antagonise the expropriated ryot and his fellow ryots and (2) that it would interfere with the traditional freedom of cultivation enjoyed by the Indian ryot. In our opinion these objections still prevail in full force, and the acquisition of land for a factory purpose should be left to voluntary negotiations.

(*b*) This question does not interest in Western India where they draw their entire supply of cane from their own farms nor those in Southern India where factories have definite sources of supply in the fields of ryots with whom enter into agreements. It is of importance however in the United Provinces and Bihar where owing to a large growth of new factories conditions have altered since the date of last Tariff Board's report. The passing of Act XV of 1934 fixing a minimum price of cane and in fact no insuperable administrative difficulties have been experienced and removed the main objection to zoning from the ryots' point of view. In our opinion it would be desirable both with a view to remove uneconomic competition of cane and to establish a more intimate personal relation between the factory owners and the ryots to introduce a system of zoning. But this should be restricted to gate cane.

The working of the system should be entrusted to a committee consisting of all the factory owners in the zone, two ryots' representatives and a Government official. This committee should meet every year and define zones either by allotting separate blocks of fields to individual factories or by defining centres of purchase of cane at which there should be no competition between factory and factory. Such a committee would act without undue rigidity and would be alive to any change in economic and crop conditions which required alterations in zones.

23. We consider that the development of feeder roads is the legitimate functions of local boards. As regards advances of cash or supply of seed and manure, several factories even at present make them. Such advances should continue to be purely voluntary. It is suggested that if a summary process were provided for recovery of these advances the extension of voluntary system would be facilitated.

24. (*a*) We consider that at present there is no need for fixing a quota, but realise that the need may arise in the near future.

(*b*) The last Tariff Board rejected a proposal for licensing on the grounds mainly (1) that enlightened self interest would prevent capitalists from starting new factories, where old ones already existed and where there was no room for expansion and (2) that the only safeguard for maintenance of fair prices for cane was competition between factories. The expectation underlying the first ground has not been realised and the second ground has been removed by Act XV of 1934. We consider that all new factories and extensions of existing factories should be subject to licence. The licensing should be entrusted not to provinces but to an All-India Body.

25. (*a*) & (*b*):—

Year.	Gate cane.		Rail cane.
	Mds.	Srs.	Mds.
1932-33	1,517,859	39	656,457
1933-34	1,896,390	23	23,772
1934-35	1,463,992	20	106,751
1935-36	1,995,952	10	197,279
1936-37	2,418,717	20	*Nil.*

(c) *Nil.*

The proportion of cane has varied from year to year as a result of the development of the area under sugarcane cultivation.

26. The gate cane is transferred by carts. No lorry has been used so far. The average weight of cane carried per cart is 18 maunds. Improvement in the type of country carts by the substitution of rubber-tyre carts is not possible, for the cultivators being poor cannot afford it. As regards ourselves we have not employed any improved type of carts other than those of country carts.

27. The condition of main and feeder roads is very unsatisfactory and the attention of District Boards should be drawn to their proper repairs.

28. Cane is brought by road from a distance of 5 to 10 miles and the average time taken between cutting of cane and delivery at factory is 24 hours to 36 hours duration at the most. During road transport it is left to the sweet will of the cultivators to protect cane as far as they can from deterioration.

29. The average cost of transport of cane by cart per maund per mile is about 6 pies. The cane-growers mostly employ their own carts. It is sometimes that they have to hire and the average cost of hiring comes to about Rs. 1-2-0 per cart.

30. No.

31. We have introduced ticket system for the continuous and uniform supply of gate cane. We issue periodical tickets to the cultivators and they bring only as much cane as we require for our daily consumption and thus the said system has insured prompt delivery of cane and speedy release of carts. The normal period of detention of a cart at our gate is 24 to 36 hours only.

32. Cane has been transported to our factory in the past years regularly from a distance of 20, 31 and 47 miles. The average time taken between cutting of cane and delivery at factory has been two to three days. The railway arrangements for transport of cane have not been very satisfactory, for the authorities have very seldom complied with our requirements timely in respect of wagon supply.

33. The railway freights are calculated on mileage basis. There has been change in rates, particularly this year on the recommendation of the Government. We prefer the substitution of maundage rate per mile over flat rate.

34. We wish to draw attention to the fact that the railway freights for raw materials, sugar and other manufacturing chemicals are very high, and they should be considerably reduced.

35. *Nil.*

36. It will be very much helpful and advantageous if the tramway system for transport of sugarcane is introduced in this area at the cost of the Government. It will give immense relief to the growers and the factories as well.

37. Quality of cane is deteriorated on account of delay in delivery of cane after cutting the same from the field and it directly affects the recovery percentage of sugar by ·1 to ·3 per cent.

38. (a) & (b) In the year 1936-37 we have purchased the entire quantity of cane from the cane-growers direct. In the past years too we have been taking cane from the growers, but through the medium agents.

39. We have been giving advances to some cultivators.

40. We made our cane purchases direct from growers in the season 1936-37 and as such we have no commission to pay.

41. *Nil.*

42. No sooner the weighment of cane and taring of cart is finished we make the payment then and there and consequently there is no interval between delivery of cane and payment.

43. Cane prices during the last five years are as under:—

Season.	Amount. Per maund. As. P. As. P.
1932-33	3 6 to 7 0
1933-34	4 0 to 8 0
1934-35	5 0 to 8 0
1935-36	5 0 to 8 0
1936-37	3 6 to 4 9

The purchasing rate of cane fixed up by the Government varies (goes up) at different periods of the season due to internal competition, but no such variation was experienced this year due to cultivation of cane being highest on record.

44. The prices are fixed for the sugarcane by the Government in relation to the prices of sugar and percentage recovery of cane for the period, and thus they differ from time to time.

45. The prices of cane are affected if the jaggery prices are higher as the growers take up to manufacture of jaggery, and thus the prices of cane go high.

46. The variation in price of jaggery depends upon the condition of cane crop.

47. We have not paid prices in excess of the minimum rate fixed under the Sugarcane Act this year.

48. We are of opinion that the existing formula which relates the price of cane to the price of sugar and the existing practice in United Provinces and Bihar which entails the revision of the price of cane every fortnight are both unsatisfactory. The formula results in a vicious circle, a fall in the price of sugar leads to a fall in the price of cane. This in turn leads to a fall in the price of sugar and so the process goes on. A fortnightly revision of the price creates undesirable uncertainty both in the minds of ryots and of the factory owner whose stock of sugar produced from cane bought at a higher rate deteriorate in price when the cane price is subsequently lowered. The price of cane should be disconnected from the price of sugar and should, it is suggested, be fixed on the cost of production of cane as ascertained by the Tariff Board in its present enquiries. It is necessary that the price should be uniform for both in United Provinces and Bihar. And the price once fixed at the commencement of the crushing should be maintained for the whole of the season.

49. We have repeatedly considered the question of introducing a bonus but has not been able to devise a satisfactory formula.

50. Durations of crushing for the last five years are as under:—

Season.	Date of starting crushing.	Date of closing crushing.
1932-33	See Form No. III.	
1933-34		
1934-35		
1935-36		
1936-37		

51. It is possible to extend the crushing season by the introduction of early and late varieties of cane for such introduction being in the best interest of the growers and the factories as well will facilitate the uplift of the industry.

52. Yes, but there are possibilities of further assistance which can be given by the Imperial Council of Agricultural Research of India and Agricultural Co-operative Department of the Government for improving the quality of cane and maundage per acre.

53. (*a*) We employ mechanics, labour having technical experience in the manufacturing side and non-skilled labour during the season which is very much curtailed during off season, and some of the skilled labour is maintained on retainers.

54. Not much.

55. Almost completely.

56. The factory has its own houses built for its employees. They are given free light, fuel, water supply, and medical attendance. The factory also aids the local schools for the education of the children of the employees.

57. The factory in previous years was using extra fuel to the extent of 6·5 per cent. on cane, but during the last two years it has been reduced to 2·5 to 2·8 per cent.

58. Only molasses.

59. The molasses produced are about 3 to 3·5 per cent. on cane. Prices of molasses obtained so far from the start of the factory are as under:—

Season.	Amount.
1932-33	See Form I.
1933-34	
1934-35	
1935-36	
1936-37	

60. A new market has been created from last year by the Indian Molasses Company who are exporting molasses to foreign countries. The transport facilities are very adequate and the freights are higher than what they ought to have been. The freights from factory to port are Rs. 27 per tank to Sonepore from here.

61. We have been generally selling our molasses so far without getting much return. We suggest the alcohol manufacturing should be allowed by the Government for utilisation of molasses of factories.

62. We have no surplus bagasse to dispose off but the bagasse can be utilised for better purposes, for manufacture of boards and extra fuel can be used in factories in its place.

63. As per items 61 and 62.

64. Our sugar stock in the beginning and the end of each of the following seasons were as under:—

Season.	Beginning.		End.	
	Mds.	Srs.	Mds.	Srs.
1932-33	...		...	
1933-34	...		...	
1934-35	4,051	0	56,872	20
1935-36	5	0	150,632	20
1936-37	16,322	20	139,862	20

65. We have two godowns for storage of sugar, which can accommodate about 60,000 bags, and we consider that this accommodation is sufficient for our requirements; and we do not contemplate to add any other stores.

66. The deterioration does occur in storage of our sugar on account of dampness during rainy season. The damage is more if the sugar is perfectly dry during the process of manufacture as it ought to be.

67. Some of the sugar which gets very much deteriorated is reconditioned and a bit superior to it is sold on lower price.

68. The quality of sugar may not deteriorate if up to date sugar godowns are built up, but under the present condition of industry it is very difficult to invest big capital for its improvement.

69. Sugar sometimes is damaged in transit specially at places of transhipment. It can be saved from such damage by more adequate supervising done by the railway company.

70. We generally feel difficulties in obtaining required number of wagons for transportation of sugar. This year we had to suffer a tremendous loss and had to pay heavy rebates to the customers for non-fulfilling the contracts during the required time on account of the above mentioned reasons. The customers have been reasonable in asking rebates as the condition of the market has been very fluctuating. In fact the railway company should be made to make up this loss of the factories for which they are wholly and solely responsible.

71. Sometime old and bad wagons are supplied from railway company which leak during rainy season, thus damping the sugar. The railway company should try to supply good wagons for sugar transportation.

72. The average price at which our sugar was sold are given as under:—

We have sold our sugar during last five years generally to Bombay, Cawnpore and Ahmedabad markets. The freight rates are also given here:—

Season.	Average price of sugar per maund.	Freight to Bombay per maund.	Freight to Cawnpore per maund.	Freight to Ahmedabad per maund.
1932-33				
1933-34				
1934-35				
1935-36				
1936-37				

73. We have got no spare copies of balance sheets to be sent, but the particular of our book value of our property as it stood at the end of the last complete years under the following heads are given as below:—

Season.	Leases and Lands concessions.	Buildings.			Plant and machinery.			Other assets.		
		Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1932-33	..	1,76,814	0	3	7,91,065	12	4	5,49,261	5	7
1933-34	..	2,04,068	11	3	8,27,431	15	11	6,02,300	1	8
1934-35	..	2,15,119	6	3	9,64,836	4	6	3,13,457	9	0
1935-36	..	2,15,203	5	3	9,69,506	6	3	8,64,776	7	6
1936-37	..	2,15,304	4	6	9,73,085	5	6	7,55,896	4	9

74. The depreciation rates which we have written off are the same as allowed by the Income-tax Department. For full details see Form No. 1.

75. Total amount set aside for reserve fund up till now is Rs. 51,000.

Year	Per cent.	Amount.	Total amount.
		Rs.	
76. 1932-33	15	1,65,000	...
1933-34	15	1,65,000	...
1934-35	5	55,000	...
1935-36	15	1,65,000	...

77. Up to season 1934-35 we never borrowed anything from outsiders, but from the last two seasons we are borrowing from bank on the security of our sugar stock at 3½ per cent. interest.

78. Please refer Form I.

79. We consider that 10 per cent. on the original block account (without allowance for subsequent writings off for depreciation) would be a fair return. The reasons for this view are:—

(1) That in the years when new factories were started in large numbers, money was procurable only at high rates of interest and debentures were generally issued at 7 to 8 per cent.

(2) The industry is a young industry and both in the interset of factory and of provision for labour welfare reserves have to be built up. If 10 per cent. is earned, 4 per cent. will have to be put aside for the reserve fund and the actual dividend to the shareholders only 6 per cent.

(3) Provision has to be made against running risks, breakdown of machinery and so forth.

80. As Form No.-III.*

81. See Form No. II.*

82. It depends entirely on the quality of sugarcane; if the quality can be improved the recovery rates will naturally go higher and the working cost will be lower.

83. The principal markets where we sell our sugar are Bombay, Cawnpore and Ahmedabad.

84. We give agencies for selling our sugar in different markets.

85. The Contract Form which we use at present is suitable to our requirements and we have nothing to suggest in the matter.

86. No data available.

87. We think there is not much fluctuation in the retail price and wholesale price. The retail prices go up and down in relation to wholesale prices.

88. No datas available.

89 & 91. It will be convenient to deal with these two questions together. The best quality Indian sugar is as good as the best imported foreign sugar in keeping and other qualities.

90. Java sugar is preferred in hotels and restaurants run in the European style for their customers—Europeans and Europeanised Indians. But even here high grade Indian sugars are replacing Java sugar. To a very small extent in the preparation of some Indian sweets where customers like a bright, white colour Java sugar is used.

92. Stocks are carried to the beginning of next season by the manufacturers. At times they are overcarried, and sometimes they are left to be sold off even during second season.

93. We consider that a marketing survey would be advantageous, as it is an essential preliminary to the operations of a Central Market Organisation.

94. We are in favour of establishing a Central Sales Organisation to be controlled by the industry itself. Detailed proposals are under the consideration of a special committee of the Association.

95. We are in favour of standardisation as it is an essential preliminary to the operations of a central sales organisation. Experience was not available when standards were tentatively suggested and factories were not able to adopt it. They had therefore to do business on the basis of the samples of individual factories.

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* Not printed.

96. (*a*) & (*b*) Actual business on the basis of the Director's standards has been done only by a very few factories. Several factories however utilised standards for grading their own sugar and others have with their help classified their daily output. It is stated by several factories that while they use the standards for grading their sugar they are unable to do actual business as buyers, merchants, dealers do not possess a set of them.

97. A material reduction in the price of the standard may tend to popularise them.

98. We consider that the time is not yet right for the establishment of a futures (or terminal) market. Futures markets are difficult to control. No amount of rules will secure it, as the working will depend on men and not on the rules.

99. This may be estimated at a million and one hundred thousand tons. Considering that the consumption of white sugar is only 7 lbs. per head, as against 100 lbs. in Western Europe, United States and Australia, and there has been a large consumption in the world in recent years, there do seem to be possibilities of increasing the consumption. The present low prices are another factor in favour of an extension.

100. It is not possible to say to what extent factory sugar is replacing gur as judging from the statistics both industries are expanding. In the sweetmeat trade however it is a matter of common knowledge that while for certain sweets gur is still preferred, the substitution of sugar for gur has gone far. It is impossible to make an estimate of the extent of this substitution.

101. We have no useful information on the subject.

102. No data.

103. In 1904 Java landed her sugar in India at unremunerative prices. The fact will be clear from the following statement of prices *ex*-duty of Java sugar c.i.f. Calcutta:—

Date.	Prices in Indian currency per maund. Rs.	A	P.
1933—			
January to March	3	12	2
April	3	12	5¾
May	3	10	7
June	3	12	6
July	3	13	0
August and September	3	11	6
October	3	10	6½
November	3	9	1¼
December	3	4	1
1934—			
January	3	1	8
February	3	6	1
March and April to 24th	3	5	1
April 25th to 3rd May	3	3	1½
May 4th to 10th	3	1	9
May 11th to 28th	3	1	3¾

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Date.	Prices in Indian currency per maund. Rs. A. P.
1934—*contd.*	
May 29th to 21st June	2 15 4½
July 9th to 16th	2 15 10¼
July 17th to 30th	3 0 9¾
July 31st to 9th August	3 0 4
August 10th to 20th	3 1 3¼
August 21st to 26th September	3 0 4
September 27th to 6th October	2 13 4¾
October 7th to 10th	2 12 1
October 11th to 27th	2 13 4¾
October 29th	2 11 6
November 13th	2 8 9
November 14th	2 9 3

The last Tariff Board considered that under normal conditions the price of Java sugar landed in Calcutta would be Rs. 4 a maund *ex*-duty, but in circumstances of exceptional competition or for special reasons Java manufactures might go down as low as Rs. 3-4-0 per maund. At the time Java was suffering from large accumulated stocks of unsold sugar. The facts were brought at the time to the notice of Government of India by a deputation from the Indian Sugar Mills Association which met the Hon'ble Members concerned on 24th November, 1934.

104. Export of sugar in tons—

	By sea.	By land.
1930-31	493	40,126
1931-32	226	28,835
1932-33	437	27,729
1933-34	425	23,110
1934-35	363	24,034
1935-36	389	25,836
1936-37	529	23,381 (for 10 months up to January, 1937).

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107. **Exports** of molasses from India—

	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
Aden and Dependencies . .	13	12	11	13	...	...
United Kingdom .	...	...	7	179	153	*Nil*
Ceylon . . .	390	658	707	890	890	925
Union of South Africa . .	13	12	9	14	...	...
Zanzibar and Pemba . .	14	15	17	17	...	...
Other possessions .	13	21	13	19	...	...
Other countries .	...	...	...	110	101	...
	443	718	764	1,141	1,153	1,415

In 1936-37 24,195

108, 109 & 110. Enquiries in these connection can be had from Indian Sugar Mills' Association.

111. The following statement shows the molasses produced in India and molasses imported into India in the last six years:—

	Indian production.	Imported into India.
	Tons.	Tons.
1930-31	269,000	102,204
1931-32	365,809	40,191
1932-33	461,658	31,991
1933-34	430,000	2,401
1934-35	406,000	415
1935-36	494,000	*Nil.*

It is the increase of Indian production that affected imports of molasses and not the duty. No Indian industries have suffered as molasses are available at nominal price in India itself.

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The Vishnu Pratap Sugar Works, Ltd., Gorakhpur.

1. This factory started the manufacture of sugar in the year 1933-34. Its full crushing capacity is 400 tons of cane per day of 22 hours.

Output of this factory.

	Crushing season.	1st Sugar.	2nd Sugar.	Total.
2.	1933-34 . .	100,122·5	66,717·5	166,830
	1934-35 . .	124,367·0	78,472·0	202,839
	1935-36 . .	165,455·0	92,637·5	258,092·5
	1936-37 . .	202,548·5	20,087·5	222,636*

3. (*a*) It gets its full supply of cane at the gate from its surrounding area and from view point of cane supply it is advantageously situated. But as regards the supply of other materials its situation is not favourable and all the important markets are far off situated.

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* Including 3,400 maunds of reconditioned sugar of last year.

(*b*) It is situated on the loop line of Bengal and North-Western Railway. There are no pucca roads in this locality excepting katcha roads which are in the most wretched condition.

(*c*) Labour supply is adequate.

5. Since the lay-out of our factory we have made the following extensions to the then existing plant and the amount of money spent are noted below:—

Calandria pan complete with condenser and other fitting with other spare parts—Rs. 49,959-1-6.

One plate and frame filter press, a battery of four centrifugals machines, one air compressor and two sulphur furnaces—Rs. 21,876-4.

Three new M. S. Tanks for sulphuring syrup, Magma mingler, two crystallizers and one melting tank—Workshop made.

6. The future of the sugar industry does not allow to contemplate extension and replacement.

7. (*a*) The main factors determining the size of an economic plant are a good cane producing area for supply of sufficient cane, capital sufficiently available for payment of cane prices and other charges, capital—available for the size of the plant, duration of the season and—situation and marketing facility for the production to the consuming centres and availability of manufacturing materials and coal and firewood at reasonable prices.

(*b*) 400 tons.

8. Leaving aside some simple parts which can easily be manufactured in this country, all other parts are imported.

10, 11, 12 & 13. Cultivation of sugarcane is not done.

14. (*a*) Since the year 1933-34 when we started manufactures of sugar the quantity of cane available for crushing went on increasing. The figures below will indicate the extent to which changes in cane availability have occurred.

Year.	Cane crushed.
1933-34	1,665,408·75
1934-35	1,991,782·25
1935-36	2,577,120·0

In the year 1936-37 the highest amount of cane was available.

(*b*) While examining the sucrose content of cane of the last years, we find that no improvement has been made in the quality of cane.

16. This factory is assured of sufficient sugarcane supply.

17. In the years 1933-34, 1934-35, 1935-36 competition of neighbouring factories used to rise towards the close of the crushing season when shortage in cane supply were experienced. Prices used to rise unusually high and cane-growers used to supply the cane at their own discretion but in the year 1936-37, the area under cane which was available in the year increased enormously which has resulted in overproduction of sugarcane.

19. The quantity of sugarcane which was available in the year 1936-37 was in excess of our requirements.

20. No proper information may be given as to the cost of cultivating cane nor the average outturn for circumstances vary with each grower with each plot under sugarcane.

25. Our entire supply of cane is from gate.

27. The mileage of roads (all katcha roads) in our vicinity is not at all adequate. The condition of the main and feeder roads is pitiable.

28. Only a small part of the cane cart come by the katcha road and the longest journey is of five miles. The average time taken between cutting cane and delivery at factory is 24 hours.

29. Cane-growers employ their own carts and also hired carts.

The average cost of transport of cane per maund within five miles is anna 1.

30. No tolls or other dues are levied on carts supplying cane to our factory.

31. An estimate of the area held by each grower of cane to reside in the area from which we ordinarily get our supply is made in the beginning of the crushing season. Tickets for as many carts as the factory is estimated to take in a single day are issued to the growers on day before and carts come on the next day. Such a system was introduced in the season 1936-37 for in the previous years the factory arranged supply through contractors who were paid commission for this. Under the above system the carts are emptied in 24 hours.

32, 33 & 34. No cane is taken from outside so the factory does not take cane through the rails, the question of freight does not arise in this case.

35 & 36. Tramways do not serve our factory.

37. The general deterioration of cane owing to delay in delivery of cane by road is 5 per cent. as we have estimated from our case.

38. (*a*) In the years 1933-34, 1934-35, 1935-36 the proportion of cane purchased direct from cane-growers were, 9·5, 8·0 and 7·4 per cent. respectively but in the year 1936-37, all the cane was purchased direct from the cane-growers. In the years 1933-34, 1934-35, 1935-36 the proportion of the cane purchased through contractors were 90·5, 92 and 92·6 per cent. respectively.

39. Last year no advance in cash or in kind was given to growers. The arrangements for supply through growers was made only just before the opening season.

40. Our cane is not purchased through contractors.

41. No parts of our cane is supplied by any cane-growing or cane-supplying association.

42. The carts come to the factory premises daily and wait in lines there for weighment at the gate by turn.

The payment is not made at the time of delivery of cane but a cane-grower can receive payments at the payment office within 24 hours of his delivery of cane. The payment is made in the day time only.

43. *Purchasing rates per maund at different periods of the season*—

Years	As. P.	As. P.	As. P.	As. P.	As. P.	As. P.
1933-34 . .	5 0	5 6	6 0	7 0	...	...
1934-35 . .	5 0	5 6	6 0	7 0	7 6	8 0
1935-36 . .	5 6	5 3	5 0	5 9	6 0	7 0 to 8 0
1936-37 . .	5 0	4 9	4 6	4 3	4 0	3 6

As is evident from the figures of the first three years the prices vary at different periods of the season. Prices used to go high towards close of the crushing season.

44. The prices at which the sugarcane were purchased do not bear any definite relation to the price of sugar. During the first three years the prices tended to go upwards as the supply of cane became less and less towards the close of the season, while the last year the price went down during the same period.

45. In this area gur or khandsari sugar do not influence the supply and the price of sugarcane.

46. No.

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47. Refer to answer to Question No. 43.

	Years.	No. of crushing days.
50.	1933-34	154
	1934-35	153
	1935-36	170
	1936-37	167

The variations in the duration of seasons are on account of supply of sugarcane and starting date of crushing season.

53. (*a*) (i) *Skilled labour.*—Engineers, mistries, drivers of engines, pumps and motors, turners, blacksmiths, moulders, firemen, boiler attendants, electricians, carpenters and khalasies, chemists, sugar pan boilers, triple man, juice supervisors and mates.

(ii) *Unskilled labour.*—Donga coolies, bagaciallo coolies, fire coolies, khalasi coolies and oil men fitter coolies, coolies at each manufacturing station, lengri coolies, purchi coolies, sweepers, and drain cleaners.

(*b*) (i) *Skilled labour.*—The same as in (*a*) excepting drivers of engines and pumps, sugar pan boilers, triple man and supervisors.

(ii) *Unskilled labour.*—Fire coolies, khalasi coolies, fitter coolies, workshop coolies and a few coolies for cleaning purposes in the evaporating house.

54. All skilled labour is local namely of this province.

55. Indian skilled labour is available in plenty. We do not realise the importance of employing skilled labour imported from abroad.

56. The labourers who are inhabitants of the area surrounding the factory go to their respective houses. Others are given free accommodation according to position and status.

The employees have facility of library, games and other recreations. There is attached to the factory a well equipped dispensary where free medicines are given. Post office with saving bank account has been specially opened for the facilities of the factory employees.

57. The whole of our requirements of fuel are not met with from the bagasse available in the factory. Additional fuel is wanted. We have to purchase firewood and coal for the purpose. The figures of firewood and coal used as additional fuel each year are noted below from which an idea of the extent to which it is necessary to supplement the fuel derived from bagasse. Also the prices spent on these are given—

Year.	Firewood.	Coal.	Amount spent.		
	Mds.	Mds.	Rs.	A.	P.
1933-34	...	...	5,974	10	7
1934-35	25,285	8,807	7,672	12	8
1935-36	19,601	1,000	6,584	15	3
1936-37	45,547	12,699	13,095	8	6

We do not have any surplus bagasse.

58. The by-products produced in our factory are bagasse, press mud and molasses.

59. The quantities of final molasses produced and the prices obtained from them each year are as below:—

Year.	Molasses produced.	Prices obtained.		
	Mds.	Rs.	A.	P.
1933-34	66,616	*Nil.*		
1934-35	70,477	*Nil.*		
1935-36	94,462	4,807	2	9
1936-37	74,260	*Nil.*		

60. No demand for molasses at all.

61. When our molasses is not purchased by merchants we have to throw them out.

62. We have no surplus bagasse at all hence the question does not arise.

63. The other by-product namely press mud is utilised by cultivators as manures. It is used as fuel also.

	Crushing season.	Stock at the beginning in mds.	Stock at the end in mds.
64.	1933-34	Started production	84,417·5
	1934-35	10,552·5	105,692·5
	1935-36	*Nil*	196,673·5
	1936-37	28,120	139,567·5

65. The bags are stocked in the two godowns of the factory on floors which are made damp-proof by wood, cokes, etc. The capacity of our godowns at present is of 90,000 bags. In the year 1934-35 the capacity was increased by building one more godown but now we do not at all contemplate increasing the capacity.

67. The damaged sugar is either sold outright at a reduced price or melted.

69. Sugars are sometime liable to get damaged in transit from the factory on account of leaking defects in the wagons.

Ramkola Sugar Mills Co., Ltd., Gorakhpur.

(1) *Letter dated the 20th June, 1937.*

We beg to enclose herewith a statement in reply to the General Questionnaire issued by you in connection with the Tariff Board enquiry with six spare copies.

We purchased the factory from the Punjab Sugar Mills Co., Ltd., after it had run for only one season. We took our possession on the 1st June, 1933, and have worked for the last four seasons, *i.e.*, 1933-34 to 1936-37. We have not therefore been able to supply you the statistics for the first season 1932-33 except whatever information was available. Similarly as regards the season 1936-37 the figures are not yet available as we closed down operations on the 14th instant and the accounts have yet to be finally adjusted.

We would have sent our reply through the Indian Sugar Mills' Association but as the time at our disposal was short we are sending the same direct to you.

We cannot over-emphasize the need of the continuance of protective duty in the best interest of the country and trust the Board will fully realise the importance of this matter.

Enclosure.

REPLY IN SERIATIM TO THE QUESTIONNAIRE ISSUED BY THE TARIFF BOARD IN CONNECTION WITH THE PROTECTIVE DUTY ON SUGAR.

Protection of Sugar.

1. Our factory started cane-crushing operations in December, 1932. Its nominal capacity was 400 tons per diem, but as some of the machinery was inefficient, the results achieved during the first two seasons were far from satisfactory.

2. The output of sugar for each of the last five seasons is given below:—

Sugar.

	1st.	2nd.		3rd.		Total
	Mds.	Mds.	Srs.	Mds.	Srs.	Mds.
1932-33 . .	...	...		...		60,138
1933-34 . .	...	...		...		83,085
1934-35 . .	94,380	48,367	20	399	20	143,647
1935-36 . .	205,000	73,682	20	...		278,682½
1936-37 . .	335,547	...		...		335,547 till 10th June, 1937.

3. (*a*) Our factory is situated in an area where cane is grown in abundance, but the position with regard to cane supply is not very advantageous as there are two more factories, one of which is situated within a few hundred yards of our factory and the other at a distance of 3 miles. As regards other raw materials we have to import them mostly from Calcutta which is a far off place. We obtain our supplies of clarification lime from Central Provinces and have to pay very high railway freight. The quality of lime manufactured in Central Provinces does not compare favourably with that produced in the Punjab but we cannot import our supplies from the latter province as the railway freight is excessive which the industry cannot afford.

(*b*) Excepting railway there are no other facilities for transport. The roads are few and being unmetalled are in an awfully rotten condition.

(*c*) We obtain skilled labour mostly from outside, as local labour is not available, we are however trying to provide them jobs so as to train them properly. Only unskilled labour is available locally but is not so efficient as it should be. It is however expected that with more experience local labour will prove much helpful.

4. The process of manufacture followed by us is of double sulphitation. Double carbonitation process is more satisfactory than double sulphitation. By former process sugar of better grain and colour can be produced. On the whole double carbonitation is more advantageous as it also yields a higher recovery.

5. Since 1933 we have made several replacements and additions to the plant. The alterations were necessitated on account of the unsatisfactory results during the first two seasons. We had to chuck out weak and inefficient machinery and replace it by efficient units at a considerable cost Besides we have made several additions to increase the general efficiency of the plant and to increase the capacity so as to take full advantage of

the crushing capacity of the mills. Since 1933 we have made the following replacements and additions:—

Replacements.

(1) Cane cutter engine.
(2) Mill engines.
(3) Fan engine.
(4) 600 boiler tubes.
(5) Sugar grinding machines.
(6) Fans and heaters.
(7) Steam pipes.
(8) Juice pumps.
(9) Sulphuring tanks.

Additions.

(1) Extension of cane carrier.
(2) Two boilers.
(3) One quadriple.
(4) Vacuum pan oven.
(5) Vacuum engine.
(6) One turbine pump.
(7) Twelve centrifugal machines.
(8) Cross hopper conveyor.
(9) Duplex pump.
(10) Compressor engine.
(11) Molasses pumps.
(12) Five filter presses.
(13) Two crystallisers.
(14) Four settling tanks.
(15) Condenser.
(16) Canerating set.
(17) Boiler feed pans.
(18) Extension of dryers.
(19) One juice heater.
(20) One sulphuring tank.
(21) One seeding crystallisers.
(22) Spray pond.

The following amounts were spent every year for the above additions and alterations:—

	Rs.	A.	P.
1st June, 1933 to 30th June, 1934 . .	1,90,786	5	11
1st July, 1934 to 30th June, 1935 . .	90,140	3	7
1st July, 1935 to 28th June, 1936 . .	63,048	12	10
29th June, 1936 to 31st May, 1937 . .	1,02,641	12	5

6. Few more extensions are under contemplation this year. These will cost us nearly Rs. 7,500. The object of these additions is to improve the quality of sugar even still further.

7. (*a*) The main factors determining the size of economic plant in the sugar industry are the supply of abundant cane of good varieties and other raw materials at reasonable prices, the availability of sufficient capital and duration of the working season.

(*b*) Under present day conditions the smallest unit of production which can be operated economically is a plant of at least 600 tons capacity. The industry is passing through a crisis and smaller units than this cannot possibly stand on their legs. The burden of overhead charges in the case of factories of bigger capacities is comparatively lower than in case of small units.

8. We are dependent on foreign countries for whole of the sugar factory equipment excepting a few machinery parts of minor importance and storage tanks, pipes, etc., which are manufactured in India.

9. (i) The Imperial Institute of Sugar Technology, India, is compiling statistics with regard to the manufacturing results of various factories and the position of sugar stocks. The information supplied by them is proving useful.

(ii) The Industries Department has practically done nothing to improve the condition of the Industry. Besides helping the industry in some other directions this department can solve the problem satisfactorily dealing with molasses which is chief by-product of the industry. They should move the Government to provide roads for transport of cane and also urge upon the Government to make it easy for the manufacturers to export sugar.

Raw materials.

10. No. Unfortunately we cannot get land for sugarcane cultivation as the landlords are not prepared to part with their proprietary rights. Leases are also difficult to obtain on account of small holdings.

11 & 12. As we have no land for farming the question does not arise.

13. We have not tried any experiment in relation to early and late varieties of cane and manure. It is wellnigh impossible to try these experiments without a farm of our own. The agricultural department has evolved a scheme for carrying out these experiments and we have contributed Rs. 6,000 during the last two years by joining the scheme but we don't find even the slightest improvement in the quality of the cane supplied by them. We don't think the Cane Development Organisation set up by them has met with any success in introducing early and late varieties of cane. By carrying an intensive propaganda for sowing sound seeds of good varieties and using suitable fertilizers the department can help a lot in improving the yield per acre as well as sucrose contents of cane to the benefit of the agriculturists and manufacturers.

14. (*a*) The quantity of cane has increased to a large extent during the past few years. The cane-growers have been giving preference to this crop and every available bit of land has been utilized for this purpose. This is due to the comparatively much higher return that they are getting for this crop.

(*b*) Desi cane has been replaced by Coimbatore varieties to a very large extent. Very few growers now sow desi cane, but since the introduction of Co. varieties there has been practically no improvement in the quality of cane. On the other hand it is apprehended that due to improper rotation and want of good fertilizers the soil is losing its richness every year and the quality may deteriorate in course of time.

15. There is no danger of damage from frost in our area. The crop is liable to disease or insect-pects, but mostly the damage is done from water logging as considerable area in vicinity of our mill is low-lying land and when the rains are excessive 10 to 15 per cent. of the crop is damaged through this cause alone.

16. In spite of other factories being so closely situated we get sufficient supply of cane. The variety most commonly cultivated in our area and crushed in our factory is Co. 13. The average field yield per acre is about 250 to 270 maunds and the sucrose contents is about 12½ per cent. when the cane is mature.

17. The competition of other factories situated within a radius of 20 miles does affect the supply of cane and the prices; specially when due to damage to the crops the quantity of cane available is comparatively smaller than in normal years.

18. (1) The area under cane cultivation has been steadily increasing till last year.

(2) But this year the sowing is decreased to some extent. Climatic conditions are not responsible for the variation. It is mainly due to the prices obtainable for sugar and the consequent decrease in the rate of cane.

(3) Very little gur is manufactured in our area and so its price has no bearing on the variation of the area under cultivation.

(4) Even at the present rates the cultivators prefer cane crop to any other crop as no other crop is so paying.

19. We don't consider it advisable to impose any restrictions on the production of sugarcane as it cannot be in excess of our requirements. The crushing season can be prolonged proportionately. This may tend to raise the output of sugar, but the increase in consumption and the possibilities of export can be expected to keep pace with it.

20. Information not available.

21. The main difficulty of the cane-grower is that they are not sufficiently educated as to realize the usefulness of sowing seed of good varieties, rotation of crops, using of fertilizers, etc. Both ignorance and poverty stand in their way. They are in the clutches of all powerful zamindars and their general uplift can bring about improvement in every direction. The chief difficulty in the delivery of cane to the factory is the absence of metalled roads. Roads are in such a wretched condition that the carters have to waste much of their time and the bullocks have to undergo a very great strain before they arrive at the factory gate. We suggest that all approach roads to the factory within a radius of 6 miles should be metalled by the District Board with the assistance of the Government. Besides pneumatic tyres should be introduced for the carts.

22. (*a*) Compulsory acquisition or leasing of lands for cultivation of cane by factories is impracticable simply because the zamindars do not wish to sell their land at reasonable prices. We would like the Government to help the factories by acquiring at least 1,000 acres of land under Land Acquisition Act for farming. The basis of compensation should not, however, exceed the limits laid down under the Land Acquisition Act for estimating the income of the zamindars and the tenants for the purposes of an award.

(*b*) We prefer compulsory land acquisition to the system of zones, but failing the former we are in favour of allotting special areas to different factories in proportion to the cane crushed by them in the last season. The Government should spend a substantial amount from a part of sugar excise duty set apart for agricultural improvements, in rendering all possible assistance to the growers as far as possible. The supply of cane can be better regulated if separate zones are set apart for different factories and the system will also do away with unhealthy competition for cane.

23. If a "Zone" system were introduced we would distribute tickets to the growers for bringing their cane on specified dates and thus regulate the supply. We cannot bind ourselves to advance them money for their needs. We may, however, make advances for seeds and manure in few cases where we think our money will be quite safe or if the Government passes legislation for the recovery of these advances by a summary process.

24. (*a*) There is no need for the fixation of quota for different factories.

(*b*) We consider licensing of new factories and extension of new existing factories beneficial for the industry. The licenses should of course be granted only in such cases where the factories are to be erected at a suitable centre where there is abundance of cane and no factory already working within a radius of at least ten miles. In some districts there are too many factories whereas in others there are very few factories in spite of a fairly large quantity of cane available there. The margin of profit in the case of existing factories is already very low and if no suitable check is provided the condition would become worse by cut-throat competition but at the same time the starting of new factories at convenient places where cane is plentiful and the capitalists have already made some preliminary arrangements should not be prohibited by the Government.

25. The proportion of gate and rail cane crushed by us during the last five seasons is given below:—

	Gate.	Rail.
	Per cent.	Per cent.
1932-33	94	6
1933-34	86	14
1934-35	94	6
1935-36	88	12
1936-37	98	2

26. Our gate cane is entirely transported by carts the average weight of cane per cart is nearly 17 maunds. Neither we nor any of the cultivators have employed any improved type of carts for transport of cane simply because the roads are not suitable for this purpose. If the roads are improved and developed properly it would be possible to substitute rubber-tyred carts in place of country carts with many advantages. The additional maundage of cane in case of improved carts would be at least 50 per cent.

27. The mileage of roads in our vicinity is not adequate considering the arrival of carts at our station. The condition of roads is highly unsatisfactory.

28. Usually cane from within a radius of 12 miles of our factory is brought by roads and the average time taken between cutting cane and delivering at our factory is about 8 hours. At present there are no means of protecting cane from deterioration during road transport.

29. Average cost of transport by cart per maund per mile is six pies, some of the growers employ their own carts while others have to hire them.

30. No toll or other dues are levied on carts coming to our factory.

31. We have been employing purchasing agents and canvassers to arrange continuous and uniform supply of cane but have come to the conclusion that it is no use employing any middlemen for this purpose. The normal period of detention of carts at our factory gate is 24 hours. As there are two factories at our station the carts are released much more speedily than at other places.

32. Rail-borne cane is transported from stations within 35 miles of our factory. The average time taken between cutting of cane and delivery at factory is 36 hours. The railway arrangements for transport of cane are not satisfactory especially when we feel shortage of gate cane and depend more on out-station supply.

33. The railway freights are calculated on the flat rate which is more suitable than maundage rate per mile. The rates were reduced last month as a special case as serious situation had arisen due to large quantity of cane having been still available at out-stations.

34. We consider the railway freight on firewood, coal and limestone too excessive and a substantial reduction in these rates is highly desirable.

35. No tramway serves our factory.

36. If the roads are metalled and improved type of carts are introduced there would be no use of laying out tramway system as the latter cannot serve a sufficiently wide area and the carts would still be required. The cost of tramway system will also be prohibitive.

38. During the previous years the cane purchased mostly through contractors or Agents but from the last season we discarded this system and have been mostly purchasing direct from cane growers.

39. We do not give any advance to the cultivators nor do we provide seeds. This was, however, undertaken by the Cane Development Organisation

last year. Of course we distribute manure and press mud to the cultivators free.

40 & 41. Last season we purchased a small quantity of cane through the Cane Marketing Board and the Cane Development Organisation, Ltd., to whom we had to pay commission at Rs. 1-2-0 and Rs. 1-9-0 per hundred maunds respectively.

Besides we employ a few canvassers to whom we pay annas 12-6 per hundred maunds as commission in case the supply has been satisfactory. The two cane supplying associations named above were to supply fixed quantities every month as stipulated in the agreements.

42. We have got three cart weighbridges and one wagon weighbridge at our factory gate for weighment of cane. Payment is made to the growers or their representatives within 24 hours of delivery of cane if so demanded. The normal interval between delivery of cane and payment is 2 to 3 hours.

43. The average price at which we have been purchasing cane during the last five (seasons) years are given below:—

Years.	Price per maund.	
	As.	P.
1932-33	...	
1933-34	5	3·3
1934-35	5	9·1
1935-36	5	8·4
1936-37	4	1·8

The prices usually rise at the end of the working season due to competition between the factories but this did not happen last season as cane was plentiful. Of course now-a-days the price of cane is determined by the price of sugar under the sugarcane rules and the price of cane had been steadily falling.

44. The prices at which we purchased sugarcane last season were just the same as fixed by the Government under the sugarcane rules.

45. Very little gur or khandsari sugar is manufactured in our area and the price of cane is not influenced by their price.

46. The price of gur jaggery in our area has been declining with the extension of area under cane crop and the growth of factories.

47. Last season we did not pay higher prices for cane than what the Government has been fixing as minimum rate from time to time.

48. We do not consider the basis on which the minimum prices are fixed as satisfactory. In the first place the standard of price for cane is not equitable and secondly it results in a vicious circle because a fall in the price of sugar leads to a fall of price of cane which in turn leads to fall in price of sugar and so the process continues. A fortnightly revision of the price created uncertainty both in the minds of growers and manufacturers whose stocks of sugar produced from cane bought at a higher price deteriorate in price when the cane price is subsequently lowered. In our opinion the price of cane should not be based on the price of sugar at all. It should in fairness be based on the average cost of production of cane to be ascertained by the Tariff Board and the price once fixed at commencement of the crushing season should be maintained for the whole of that season.

49. Practical difficulties in introducing a system of bonus over and above the minimum rates are many and it is not possible to analyse the cane of every cart brought to the factory gate.

50. The duration of crushing season for the last years is given below:—

Years.	No. of working days.
1932-33	147
1933-34	133
1934-35	141
1935-36	164
1936-37	191

We consider the period of less than 6 months to be hardly sufficient for economical working. Excepting last season the duration has been too small. The variations are due to the requirements of the mills and the availabilty of cane.

51. It is difficult to say anything about the possibilities of extending the crushing season by the introduction of late varieties of cane unless we are convinced about the results of the experiments. We however do not think if the early varieties can be of any use in prolonging the duration. The factory cannot gain anything by making an early start.

52. The Imperial Council of Agricultural Research has been compiling statistics and done some service but the other two departments have not been helpful to the industry in any way.

Labour.

53. We employ engineers, chemists, panmen, mechanics and fitters in our factory and a large number of unskilled labour for carrying out jobs unconnected with the manufacturing process. During the silent season labour of both kinds is required for making additions and general repairs. Of course the number is reduced to some extent.

54 & 55. Practically the whole of the skilled labour is obtained from our own country. Excepting our Chief Engineer, there is no foreigner on our staff. Only small percentage of skilled labour can be had locally and the rest is imported from other provinces.

56. There are proper arrangements for housing our labour and we do everything in our power for promoting their welfare. The unskilled labour however comes from the neighbouring villages.

Power.

57. Bagasse is not sufficient to meet our full requirements. The figures for the amount spent on fuel for the last 5 years are given below:—

	Rs.	A.	P.	
1932-33	...			
1933-34	43,977	5	9	
1934-35	27,405	6	0	
1935-36	24,607	0	6	
1936-37	10,000	0	0	(approximately).

By-products.

58 & 59. The outturn and price of molasses for the last 5 years is given below:—

Years.	Quantity.		Price per maund.		
	Mds.		As.	P.	
1932-33	...		...		
1933-34	28,000	(approx.)	...		
1934-35	56,000	(ditto)	0	6	
1935-36	97,700		1	6	(approx.)
1936-37	133,202		1	0	

The variation in price is due to greater supply and poor demand.

60. Since last year we are supplying our molasses to the Indian Molasses Company, Ltd., who export into foreign country. The railway provide tank wagons for transportation, but the supply of these wagons is much restricted on account of scarcity of rolling stock.

61. The granting of license to the factories for the starting of distilleries to manufacture power alcohol from molasses is a very important matter and the Government should give out licenses freely. The return from molasses can go up if distilleries are opened at important centres. The Government must also pass legislation making it compulsory to mix a certain proportion of power alcohol with petrol before it is used. There is no fun in withholding such facilities especially at a time when the industry is in need of a support to stabilize itself.

62. At present we don't get any surplus bagasse it may perhaps be used for making papers.

63. Experiments should be carried out by the Research Department to find out the best use to which molasses and press mud can be put to.

Storage and transportation of sugar.

64. The figures of stocks of sugar at beginning and end of each crushing seasons are given below:—

65. We have got 4 big godowns for sugar which can accommodate about 50,000 bags in all. Originally we had three godowns and due to unfavourable market conditions we had to add one more last year. This year we have extended 3 godowns and total storage capacity will now be 65,000 bags.

66. As the monsoons last here for about 4 months and there is too much humidity in the air due to frequent rains, about 10 per cent. to 15 per cent. of our sugar gets wet on account of atmospheric conditions. Second and third sugars are more liable to catch moisture. In the last off season we had therefore to install machinery for producing only 1st crystal sugar. Besides we are making two of our godowns damp-proof.

67. We usually dispose of moist sugar by outright sale.

68. We cannot answer this question at present as we have improved the quality of sugar and are also applying damp-proof course in some of the godowns. We however hope that the keeping quality of sugar will record an improvement.

69. The dealers frequently complain about damage in transit. This is due to leaky wagons in which the goods are loaded at the transhipment stations and want of proper sheds at such stations. The damage is mostly done by rain water.

70. We often experience difficulties in obtaining wagons for the transportation of our sugar. The Bengal and North-Western Railway has got only a limited number of wagons and they cannot cope with the increased traffic at all. Booking is suspended several times during the year and the supply of wagons often falls far short of our requirements.

71. We have no other suggestion to offer for improvement of rail transport except that the railway should supply wagons according to our needs and there should be adequate arrangements at transhipment stations to keep off rain water. The wagons should also be absolutely watertight.

72. We have been selling our sugar at the following rates at ports and up-country centres. The prices are of course f.o.r. our station and

there is practically no difference between ports and up-country market quotations:—

Years.	Average price for the whole season. Rs. A. P.
1932-33	...
1933-34	7 12 7
1934-35	8 0 7
1935-36	7 1 4
1936-37	6 2 3 for sugar despatched till 31st May, 1937.

73. The copies of balance sheets since the year 1933-34 are enclosed herewith.

74. The amounts written off as depreciation are given below. The rates at which these have been calculated are the same as allowed by the Income-tax Department.

	Rs.	A.	P.
1932-33	55,187	4	1
1933-34	88,922	15	9
1934-35	87,938	9	6
1935-36	91,922	5	3
1936-37	Not yet provided.		

75. We have not set apart any amount for reserve fund so far.

76. The position of profit and loss is clear from the copies of balance sheets enclosed herewith. Our balance sheet for the year 1935-36 is not yet out.

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Efficiency of production.

80. The forms are enclosed herewith.*

81. Since the year 1933 we have been spending huge sums of money for alteration and additions to our plant and installing more efficient machinery with a view to crush to the maximum capacity of our mills and to improve the standard of sugar.

82. We hope to improve the quality of sugar still further but don't think we shall be able to reduce the working cost unless the price of cane which is arbitrarily fixed now under the sugarcane rules is further reduced.

Marketing.

83. Our sugar is sold mostly in Bombay and Madras presidencies. It is also sold in Cawnpore market but the despatches are mostly made to the above two provinces.

84. We have got our selling agents at Cawnpore, Calcutta, Bombay, Ahmedabad and Jullundur, and the transactions are made with the dealers through them.

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* Not printed.

86. The Sugar Contract Form finally approved by the Indian Sugar Mills' Association, Calcutta, is suitable in our opinion.

87. The difference between the wholesale and retail prices obtained by us has not been fluctuating widely.

88. We are not in a position to say as to what extent sugar deteriorated in storage when the stocks are held by the dealers.

89. Second and third sugars do deteriorate more rapidly than Java sugar but the best quality Indian sugar is as good as the best imported foreign sugars in all respects.

90. Java sugar is preferred by few people who are either Europeans or Europeanised Indians, but Indian sugar is gaining popularity and is expected to replace Java sugar completely within a short space of time.

91. The best quality Indian sugar is equal to the Java standard, both as regards colour, grain and lustre.

92. The stocks are carried over by the manufacturers. In case of forward sales the dealers take delivery and send despatching instructions at the time stipulated in the contract or even later. Very few dealers have got their own arrangements for storage of big quantities of sugar. The carrying of stocks by the mill owners is usually financed by the banks who advance money to the extent of 75 per cent. of the value of the stock after excluding the amount of excise duty payable on it.

93. In our opinion a marketing survey of the sugar industry would prove useful to the industry.

94. We are in favour of a Central All-India Selling Organisation to be controlled by the industry itself.

95. Standardization of Indian sugar is necessary as this will facilitate the work of Central Selling Organisation. Standardization will be based on the quality of sugar as regards colour, grain and lustre. The work can be entrusted to a committee appointed by the Indian Sugar Mills' Association.

96. (*a*) No business has been done by us on the basis of the Director's standards. The grades suggested by him were too numerous and it would be better not to make the classification so complicated.

(*b*) The standards fixed by the Director were however of some help in grading the sugar though no benefit could be gained as the sales were effected on the quality of the samples.

97. The standards as we have stated above should not be too many and they should be popularised by lowering their price.

98. The establishment of terminal market or a "Futures" will not help matters as too many practical difficulties will arise in controlling them.

99. This may be estimated at 11 to 12 lakh tons. With the increase of population, improvement in the standard of living and present low prices of sugar there are ample possibilities of increase in consumption.

100. The consumers have been benefited to a large extent on account of the low price of sugar and sugar is replacing gur in sweetmeat trade to a large extent. It is not possible to give an accurate estimates of this substitution.

101. This depends on the general economic conditions of the subsidiary industry referred to. It would be desirable to raise the import duty on imported sweets, syrup, preserved fruits and canning, etc. The consumption of sugar will increase if steps are taken by the Government in the above direction.

102. We cannot supply this information as we are not in the possession of the necessary data.

103. In 1934, Java landed her sugar in India at unremunerative prices. The fact will be clear from the following statement of prices *ex*-duty of Java sugar c.i.f. Calcutta.

Date.	Price in Indian currency per maund. Rs.	A.	P.
1933.			
January to March	3	12	2
April	3	12	5¾
May	3	10	7
June	3	13	6
July	3	13	0
August and September	3	11	6
October	3	10	6½
November	3	9	1¼
December	3	4	1
1934.			
January	3	1	8
February	3	6	1
March and April 1st to 24th	3	5	1
April 25th to 3rd May	3	3	1½
May 4th to 10th	3	1	9
May 11th to 28th	3	1	3¾
May 29th to 21st June	2	15	4½
July 9th to 16th	2	15	10¼
July 17th to 30th	3	0	9¼
July 31st to 9th August	3	0	4
August 10th to 20th	3	1	3¼
August 21st to 26th September	3	0	4
September 27th to 6th October	2	13	4¾
October 7th to 10th	2	12	1
October 11th to 27th	2	13	4¾
October 29th	2	11	6
November 13th	2	9	9
November 14th	2	9	3

सत्यमेव जयते

The last Tariff Board considered that under normal conditions the price of Java sugar landed in Calcutta would be Rs. 4 a maund *ex*-duty, but in circumstances of exceptional competition or for special reason, Java manufactures might go down to as low as Rs. 3-4 a maund. At the time Java was suffering from large accumulated stocks of unsold sugar.

The facts were brought at the time to the notice of the Government of India by a deputation from the Indian Sugar Mills' Association which met the Hon'ble Members concerned on 24th November, 1934.

104. To the best of our knowledge the figures for export of sugar (in tons) are given below:—

	By sea.	By land.
1930-31	493	40,126
1931-32	226	28,885
1932-33	437	27,729
1933-34	425	33,110
1934-35	363	34,034
1935-36	339	25,834
1936-37	521	23,381 (for 10 months up to January 1937).

Export to foreign countries can only be possible when Indian sugar can compete successfully with the other sugar-producing countries. With the decrease in the cost of production, reduction of railway freight and grant of preferential customs duty it would be possible for Indian sugar to be exported to United Kingdom.

105. The sugar excise duty imposed in 1934 proved to be great burden to some of the new factories and those less favourably situated, but at the same time it had some wholesome effect too in checking the further growth of factories.

Additional excise duty has been a very hard blow to the factories. The Government anticipated that the additional burden would fall on consumers, which has evidently turned out to be a merely a false hope. Several factories will run into loss in consequence of this additional excise duty which was imposed in the face of protests from all directions.

106. Since last year we have been selling our molasses to the Indian Molasses Co., Ltd., who export it to the United Kingdom. In some factories molasses is sold to the dealers who boil it in order to solidify it and then sell it in the markets which are chiefly situated in Bengal and Assam.

107. As far as we know molasses has been exported from India to the following countries. The quantities exported to each are given in tons:—

	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Aden and Dependencies	13	12	11	13	...	...	...
United Kingdom .	...	...	7	179	153	...	13,622
Ceylon	390	658	707	890	890	925	923
Union of South Africa .	13	12	9	14	...	...	9,500
Zanzibar and Pemba .	14	15	17	17	...	...	...
Other possessions . .	13	21	13	19	...	...	...
Other countries . .	...	...	...	...	110	101	140
	443	718	764	1,141	1,153	1,415	24,195

108. The protection granted by the Government has led to the expansion of the industry and has effectively checked the imports of foreign sugars to considerable extent. It has proved a boon to the cultivators and the consumers alike.

109. It is absolutely essential to maintain the protection at its present level to enable the industry to develop and stabilise itself. There are already many handicaps such as the abnormally high excise duty and the rigid cane rules and if the protection duty were reduced the industry will receive a staggering blow resulting in a very serious calamity.

110. In our opinion besides the continuance of protection duty, the Government should deduce the excise duty on indigenous sugar to Re. 1

per cwt. to enable the industrialists to have the fair margin of profits and be better equipped for making efforts to effect improvements and raise the standard of efficiency for the manufacture of sugar.

111. The following statements show molasses produced in India and molasses imported into India in the last six seasons:—

Years.	Indian production.	Imported into India.
	Tons.	Tons.
1930-31	269,000	102,204
1931-32	365,809	40,191
1932-33	461,658	31,991
1933-34	430,000	2,401
1934-35	406,000	415
1935-36	494,000	*Nil.*

It is the increase of Indian production that affected import of molasses, and not the duty. No Indian industry has suffered, as molasses are available at nominal prices in India itself.

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(2) *Letter No. 9111, dated the 21st June, 1937, from the Ramkola Sugar Mills Company, Limited, District Gorakhpur.*

In continuation of our letter No. 9093, dated the 20th June, 1937, with which we forwarded a reply to the questionnaire issued by the Sugar Tariff Board, we beg to enclose herewith a memorandum received from our Chairman to supplement the reply referred to above already sent by us. The memorandum now enclosed contains detailed answers to question Nos. 7, 14A, 14B, 19, 19B, 22, 23, 24A, 36, 49, 50, 79, 82, 93, 94, 99, 105 (i), 109 and 110. On such points where the views expressed in the previous note are at variance with the present memorandum, the views expressed in the latter should be considered authoritative.

MEMORANDUM.

7. Like all other industries, in sugar also the cost of production decreases in direct proportion to the increase in the capacity of the plant, but the question of capacity is determined by the quantity of raw-material available in the locality where the plant is set up and its distance from the consuming centres. Most of the sugar factories in India are situated in Bihar and United Provinces and by far most of the sugar produced in India is manufactured in these two provinces and they can be so developed as to supply all the sugar required for home consumption. They are, however, disadvantageously situated being far off from sea board and the maritime provinces, like Bombay and Madras. The consumption of sugar in these Provinces is only a fraction of what they produce and the mills therefore work under the supreme necessity of exporting sugar to other Provinces. For this reason they have to meet serious competition amongst themselves and this competition has led to a race amongst the mills for increased capacity and efficiency. These conditions have compelled the mills in these Provinces to increase their capacity and efficiency. The result is that whereas most of the mills in United Provinces and Bihar started with an initial capacity of only 400 tons, by additions and alterations, the capacity of most of them has been raised by 50 to 100 per cent. A 400-ton plant working for 150 days in the season would crush only 60,000 tons of cane but there are very few mills now operating in Bihar and United Provinces which are crushing only this quantity. In the case of a large number of mills the capacity has been raised to nearly double of what it was in the beginning. The supply of raw-material has also kept

pace with the increase in the capacity. A 400-ton mill has therefore ceased to be an economical proposition, in these two Provinces. If a 400-ton mill were to be now erected in these Provinces it is our opinion that it will be soon put out of action in competition with its more powerful rivals, the price of sugar remaining what it is. We shall therefore answer the Question 7 by stating as our opinion that the smallest unit which can be operated economically under the present day conditions should be of 700/800-ton capacity.

14. (*a*) This question can be more authoritatively and correctly answered by the Department of Agriculture in the various provinces. We would, however, state our opinion in general that the supply of cane in the past seven years has kept pace with the demand during the period concerned. Our experience shows that even if the local supply is deficient to meet the full requirements of the mill when it is first erected it steadily increases year by year and in not more than 4 or 5 years most of the supply required can be obtained locally. Much, however, depends on the organization set up by the mill and the encouragement held out by it for popularising cultivation of cane.

(*b*) The quality has improved but not to the extent desired. Improvement in quality as well as increase in the yield of sugar cane per acre are the great *desiderata*. Unless Indian cultivators can sell sugarcane at about the same price as it is selling in Java, our only serious competitor, we can foresee no time when the necessity for the grant of protection to the industry will cease to exist. Very few factories, if any, except Belapur and a few others own their own farms and therefore improvement in the quality of cane and yield can result only if the Provincial Departments of Agriculture make it a special concern of theirs and put forth intensive activity to bring this about.

19. We do not believe there is any necessity of curtailing the area under cane cultivation in the zone where our mill operates. In Ramkola two mills are working side by side and they have been able to take all the cane that has been produced locally in the past. As a matter of fact, there has always been such keen competition, from about the beginning of March, between various mills purchasing cane in the area concerned that the price of cane paid by the factories from about the beginning of March has always been very much higher than that fixed under the cane rules. This year has been an exception in many respects, but the price of the cane has been low this year, not because there was excessive cultivation, but solely because the price of sugar had fallen to such a low level that unless the price of cane had been reduced correspondingly the mills would have been obliged to close down for the season very early, much earlier than they ever did in the past.

19. (*a*) Failing compulsory acquisition or acquisition of long leases, all cane-producing areas, should certainly be divided into zones and assigned to different factories on an equitable basis. In alloting areas of zones, regard will have to be paid to the capacity of the plants as indicated by its latest figures and its situation. Mills situated in well-developed cane areas should not be deprived of their natural advantages and punished for their foresight by compelling them to share their supply with less prudent neighbours who were so short-sighted as to erect a factory in an unsuitable locality. Each factory should be allotted an area or zone in its immediate neighbourhood which would suffice for its seasonal requirements. In case the same area has been tapped by two or more mills in the past it should be allotted to the mill to which it is nearer provided the latter can take all the cane that is produced within the area. Only surplus supply should be allowed to go to the other mills If any concern has erected a mill in a place which is not so favourably situated, as regards local cane supply, as the other mill, it should suffer the consequences.

22. (*a*) In our opinion the Government should compulsorily acquire for each mill about 1,000 acres of cane-growing land in its immediate vicinity,

if so desired by the mill. The acquisition to be subject to certain conditions, such as—

The cultivating tenants should not be dispossessed by the mill on their undertaking to cultivate cane of suitable varieties at suitable times. Under this scheme the tenants would remain in possession as heretofore, it would be only the landlords whose proprietary rights will be acquired by the mills. The tenants would, we feel sure, receive a kinder and fairer treatment from the millowning companies than they have ever received from the landlords. At least 500 acres of suitable land should be acquired for each big mill under the Land Acquisition Act for a Research Farm in its neighbourhood.

23. We shall be prepared to make advances of cash and also seed and manure to approved persons. The development of feeder roads is the primary concern of the District Boards. They tax factories and its employees and otherwise also. These Boards owe it to their constituents to develop the feeder roads within their jurisdiction. Improvement of communications would raise the prices of agricultural produces from which the District Boards will benefit considerably. We would however be prepared to lay down tramlines within the zone allotted to us at our own cost provided we are allowed to deduct cartage from the notified price of cane on such cane as we purchase on different stations on the tramline.

24. (*a*) We are in favour of fixation of a quota for sugar manufactured by each factory in India as a temporary measure till export trade springs up. We have nearly reached a stage when the production of sugar in the country has overtaken the demand. The saturation point has not yet been reached but it is only a question of a season or so when the mills will be obliged to carry over stock from season to season. If the mills are worked to their full capacity and the working season grows longer and longer owing to the crushing of early and late ripening varieties, the production of sugar will be much more than is required for home consumption. In the absence of export business, if the industry is to be saved from disaster a quota should be fixed for all the factories so that no large surplus has to be carried over from year to year at the end of the crop. The same result can be achieved by restricting the cultivation of cane. We are not in favour of this though till the export trade springs restrictions should be placed on increased cultivation of cane.

36. The carriage of cane to the factory from the fields by a tramway system is definitely advantageous because it ensures the supply of fresh cane to the mill which results in increased recovery. It also helps in reducing the cost of raw-material. The District Boards, however, do not readily grant permission for laying out tramlines on their cart-roads and if land is acquired for laying down tramways, the cost would be prohibitive. Laying down of tramways on the District Board roads would not interfere with the normal traffic in any way. The local Government should therefore encourage the laying down of such lines.

44 & 48. Both in United Provinces and Bihar, the minimum price of cane is fixed fortnightly on a sliding scale based on a standard price. Though scientific exactitude cannot be claimed for it the system has, on the whole, worked satisfactorily. Its great defect, however, is that the factories have to pay the same price for stale and diseased cane as for fresh cane. Also the same price for sugarcane of varying sucrose contents. In the present condition of the industry, however, it would be difficult to base the price on sucrose contents as it would lead to many complications and unnecessary disputes. We however feel that the standard price on which the scale is based is too high in the prevailing conditions of the market, as some of the factors which were considered when the standard price was originally fixed as Rs. 8-8 have ceased to be operative. For instances, molasses are unsaleable and even wherever it is possible to sell them, they fetch a very small price.

49. In our opinion it would be difficult to devise a satisfactory system of paying bonus over and above the minimum rate of cane for superior, early and late varieties. It would be far easier to fix a suitable higher rate for special varieties which are richer in sucrose contents, provided such varieties are crushed either before the ripening of the varieties geneally cultivated or after the same have been harvested so that separate accounts of the different varieties crushed can be easily kept.

50. The working season is now sufficiently long for economical working and it is expected that when the early and late ripening varieties of cane are widely grown it would become still longer. The overhead charges and the cost of production will keep decreasing as the season grows longer and longer, but even as it is, it is sufficiently long for economical working, especially as the production of sugar in the country is now reaching a stage —if the same has not been already reached—when any increase in the working days of the season would lead to overproduction and for this reason would become uneconomical. Therefore until export trade in sugar is established there can be no point in bringing about conditions in which the working season will be very much longer than it is at present.

79. This is rather a most difficult question to answer. The reply to it depends on various factors, such as the condition of the money market, the profits made by contemporary industries, stability of trade conditions and many other factors. It also depends on whether the mill is being run on borrowed capital or otherwise. We would, however, hazard the opinion that a return of about 12 per cent. after writing off depreciation, payment of income and super-taxes and after crediting the general reserve with a suitable amount would be fair in all the circumstances of the case. It should not be forgotten that the estimated profits are very seldom realized, and to illustrate this we have only to refer to the calculations made by the Tariff Board when it first recommended protection for the sugar industry. All those estimates are now out-of-date and have become obsolete. In casting fresh estimates the present Tariff Board should leave a good margin of profit to the manufacturers leaving it to competition among the manufacturers themselves to reduce it in case conditions of trade and money market warrant it.

82. In our opinion in case of well-established concerns which have already gathered the necessary experience there is very little room for any great further reduction of the cost of production or improvement in the recovery. Costs can only be reduced now, in case of the units already installed, if the working season becomes longer and the improvement in recovery can result only if better varieties are cultivated and the crop is irrigated and manured at proper times. The Departments of Agriculture functioning in the various Provinces can help a good deal in this matter.

93. We consider it essential that true statistics should be collected about the consumption of sugar in the country. The present estimates about internal consumption of sugar cannot be regarded as anything but a conjecture because the production and consumption of khandsari sugar cannot be correctly estimated. The production could be controlled only if true statistics are available.

94. A Central All-India Selling Organization is very great necessity. The price-cutting competition between the various mills operating in India has existed much too long and has brought the industry to the verge of a collapse. We believe we need not stress this, *i.e.*, the internal competition too much because the very fact that Indian sugar is selling at Rs. 2-8-0 to Rs. 3 per maund below the Java parity rate makes it clear that the fall in price of the indigenous product is due entirely to the unhealthy competition amongst the manufacturers. We would suggest that if the manufacturers cannot evolve an All-India Selling Organization which will work on sound lines, the Government should, in the interests of the agriculturists as well as for the protection of an important home industry, step in and set up such an organization by law.

99. The consumption of sugar is officially estimated as 11 lakhs tons. If we compare the *per capita* consumption of India with that of countries in the West there appears to be a vast scope for increase in consumption. But against this should be set off the extreme poverty of the people of this country and their relatively very low annual income. Increased consumption would, however, result from a decrease in the price of sugar that has occurred in the past 2 or 3 years and from the elimination of gur and khandsari sugar the manufacture of which is fast becoming an uneconomical proposition.

105. (1) In our opinion the imposing of the sugar excise duty of 1934 has had a salutary effect at least in one direction, *viz.*, it has acted as a check on the erection of more factories than were wanted. If the excise duty had not been imposed in 1934, in all probability, the number of mills now operating in India would have been at least 50 per cent. more. This would have meant a great national loss through a large block of national capital remaining idle and unproductive. Besides, it would have led to widespread distress amongst the average middle classes to which a large number of investors in the public companies belongs. The effect of the excise duty imposed in 1937 however has been most harmful both to the agriculturists and the manufacturers. The Government's objective also has not been realised in full because the additional revenue estimated by Government would be realised at the expense of the poor agriculturists and at the loss of income-tax and super-tax which the companies would have been obliged to pay in any case on higher incomes they would have earned than they would do under the present circumstances.

109. We would strongly urge that the amount of protection now granted to the industry should be maintained for the period 1st April, 1938, to 31st March, 1946. The avowed object of granting protection to the industry was to make it impossible for foreign sugar to be imported into this country. This object has just been achieved but we are afraid that if the protective duty is lessened, importation of Java sugar again will undoubtedly receive an impetus. The condition of the world market suggests that there is not going to be any such rise in the price of sugar or demand for it that Java will completely leave off Indian market even if the duty is lessened. On the one hand, the export of Indian sugar to foreign countries is not to be allowed if the decisions of the Sugar Conference recently held in London are to be implemented. On the other hand, if foreign sugar is allowed to be imported into India, it would be nothing short of a disaster. The Indian mills can produce more sugar than is required for home consumption. If they are subjected to competition from outside they will cease to function because they would be unable to compete against rivals whose cost of manufacture is much less than in case of the Indian mills. For these reasons the fullest amount of protection should be given to the industry and this can be done only by maintaining the import duty on sugar at its present level. We may remark here that even under that duty, it is only comparatively recently that import of sugar from Java has practically ceased. In the first few years of the period during which the increased duty was charged, Java imports used to be very heavy and it is due to the combined effect of the great fall in the price of Indian sugar and the protective duty that these imports have ceased now.

110. We would suggest that intensive research work should be carried on for the breeding and development of suitable varieties of cane, such as would resist intemperate climate and also be richer in sucrose contents. The type suitable for each Province would differ according to conditions of climate and the soil. Irrigation facilities should be provided where they lack and artificial manuring be taught to the agriculturists. It is the duty of the Government which collects a large amount of revenue, directly and indirectly, from the interests involved in sugar to bring about conditions in which India would produce the same quantity of cane per acre as Java does and moreover, the cane produced would be such as would yield the same amount of sugar as the cane in Java does. As sugarcane is a cash

crop and moreover gives a better return to the agriculturists, its cultivation, wherever it is possible, should be encouraged. We feel sure that the country can produce sufficient cane to feed even double the number of mills operating at present but increased cultivation of cane and erection of more sugar factories can only be undertaken if there is scope for export of sugar out of the country. Export can be possible only if the cost of production is considerably reduced below what it is. This, in its turn, can occur only if land is made to yield more cane per acre so that the agriculturists would be getting a better return from their land by cultivation of cane than at present even after selling their cane cheaper than now. To increase national wealth, to afford employment to a large number of agriculturists as well as educated young men and to improve the economic life of the rural people, the Government should, in our humble opinion, try its best to bring about conditions in which export of sugar would become possible. To achieve this object, the Government should permit the manufacture of power alcohol by sugar companies and grant licenses freely for distilleries to be set up by them. It should also pass legislation to compel the admixture of power alcohol with petrol in a fixed proportion. Research work should also be instituted to discover means of profitably utilising bagasse. If by-products are profitably utilised it will lessen the cost of production which would help in establishing export trade. The Government should, to encourage the export of sugar, through the Indian Railway systems, reduce freight to the ports by at least 50 per cent. of what they charge now and also press the British Government for the grant of the same concessions in import duty, etc., in case of sugar imported into England as that Government has granted to the sugar produced in the West Indies and Mauritius.

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(3) *Letter No. 10060, dated the 10th July, 1937, from the Ramkola Sugar Mills Company, Limited, District Gorakhpur.*

In continuation of our letter No. 9093, dated the 25th ultimo, we beg to note down the following corrections to be substituted in place of the respective head in the answers of the General Questionnaire already forwarded with the above letter:—

28. The average time taken for cutting cane and delivering at factory gate is about 8 hours to 24 hours and not 8 hours as originally stated. The cutting and carting of cane to the factory take 8 hours but not delivering at the carrier.

31. The maximum period for which carts are detained is 24 hours but it is not the normal period. Towards the end of the season the carts have to wait for a much lesser period.

72. Rs. 6-2-3 being the sale price of sugar for the season 1936-37 is for the delivery of the sugar till 31st May, 1937. This price is high as the sugar was sold at a comparatively higher rate in the beginning of the season, but taking into consideration the present prices, the average for the whole season would be about Rs. 5-10 per maund, hence the price originally stated by us is misleading.

The Padrauna Raj Krishna Sugar Works, Ltd., Gorakhpur.

Production of Sugar: Introductory.

1. In the year 1922 and its capacity now is 850 tons.

3. (*a*) For cane yes, not for material and markets.

(*b*) & (*c*) Yes.

4. Sulphitation.

7. (*a*) Likely available sugarcane supply.

(*b*) 600 tons cane daily capacity.

8. Negligible.

Raw Materials.

10 & 12. No.

17. Yes.

18. (*a*) Yes.

(*b*) (i) Climatic conditions to certain extent.

(ii) No. Principally cultivation has increased due to more factories going up and the cultivators have realised that they get more money per acre from cane than any other crop.

(iii) Not in this area as our production has dwindled down year by year.

(iv) Does not effect as other crops do not give the same return in cash.

21. (*a*) Impracticable unless laws are changed.

22. (*b*) Zones could not be guaranteed, but could be worked to an extent.

23. To the extent of Rs. 10 per acre, feeder roads we have ample.

24 (*a*) & (*b*) (i) Yes.

(ii) Yes, except for improvement of Manufacture.

25. (*a*) All.

(*b*) & (*c*) *Nil.*

Our rail-borne has stopped owing to more local cane being grown.

26. Carts average weight of cane carried 21 maunds per cart. Ample carts available so no improved types required.

27. We keep a gang to constantly keep the feeder roads passable.

28. Average distance about 5 miles, delivered in about 48 hours, no protection.

29. Own carts, few hire.

30. No.

31. We have always given daily challans to our Agents for the number of carts required daily.

32. When we crushed rail cane about 20 miles. Time about 60 hours.

33. The railway charges a flat rate for short distances and then increases for further haulage in proportion. The rates in our opinion are fair.

34. No.

35. No tramways.

36. Depends on circumstances, where carts are plentiful it is not advantageous.

38. (*a*) All purchases are made from growers. Price paid to them, this year.

(*b*) Formerly we purchased through contractors.

40. We paid Rs. 1-2 per 100 maunds to contractors.

41. Yes, some cane from the Cane Marketing Board. Commission Rs. 1-2 per 100 maunds cane.

42. Payment is made on demand.

44. Priced by Government on the sugar rate of the previous fortnight.

45. Price was governed by the price of gur some 9 years back not now.

46. Yes, the price of gur came down as the cultivators realised that they did better by supplying cane to the factories.

47. In former years price always went up from the fixed rates by 1 to 5 annas towards the end of the season due to mills competing for the cane. This season this was not the case.

48. Yes.

49 & 50. Not practicable in India.

51. From 139 days to 160 crushing days. Variation is due to the extent of the crop. Sufficiently long. Yes.

52. Some canes introduced have not been satisfactory new canes should be properly tried out in a locality before seeds are allowed to be distributed on a long seat.

53. Labour.

Power.

57. On bagassee for the last 7 years.

58. Molasses.

Storage and Transportation of Sugar.

70. Yes, sometimes.

71. No.

Capital Account and Overhead Charges.

77. From a Bank on sugar stocks at 4 per cent.

79. 15 per cent.

Marketing.

93 & 94. Yes.

95. Yes on a basis of the style of processes in vogue Sulphitation and Carbonatation.

The two sugars must be different.

96. (*a*) *Nil.*

(*b*) No.

99. Not made up. None in my opinion.

100. Cannot say.

101. Much cheaper freight.

102. No record.

103. No facts, but believe to be the case.

104. Practically *nil*. Economical.

105. 1934 duty reduced profits considerably. 1937 duty disastrous to the industry.

106. We sell to the highest bidders.

107. Yes to England.

Claim for Protection.

108. Allowing more capital to be invested in the industry, India having more of its own sugar for its people at cheaper rates and mostly that the Indian cultivators have had more money paid to them by being able to grow more cane instead of other low priced crops.

109. The protection should be increased on the present duty on Indian sugar reduced.

110. Better class of cane necessary for each locality as the variation of soils, climatic conditions, etc., are very marked in every province, even in each district canes should be of high sucrose content and purity. Yield per acre must also be considered to make them profitable to the cultivators. Our biggest disadvantage is the high cost of production in comparison with other sugar countries and this is principally on cost of cane per maund sugar. In India it is certainly more difficult than it is in countries where cane-growing is absolutely under the control of factories under different laws. Here the masses have to be dealt with.

111. The price of molasses has been affected by overproduction and at having sufficient means of utilising it in this country. Licenses should be given for making power alcohol and a law made to mix a certain proportion with petrol as is done in Africa and other countries.

The Jagdish Sugar Mills, Ltd., District Gorakhpur.

(I) *Replies to the general questionnaire.*

1. Our factory started manufacture of sugar from 26th November, 1933. The full crushing capacity of the factory as specified by the manufacturer is 400 tons per day.

2. The total output during the year 1933-34 of the various qualities of sugars produced by us was 63,575 bags. The following is the qualitywise production of the year 1933-31:—

1933-34.

		Bags.
1.	Quality No. I Standard	11,449
2.	,, ,, IA	7,714
3.	,, ,, I Local	9,191
4.	,, ,, IB	4,054
5.	,, ,, IIA	3,777
6.	,, ,, II Standard	14,776
7.	,, ,, II Local	8,824
8.	,, ,, I Crushed	271
9.	,, ,, II Crushed	24
10.	,, ,, EB	3,595

The total output during the year 1934-35 of all qualities of sugar was 62,208 bags. The following is the output of each class separately shown during 1934-35:—

		Bags.
1.	Quality No. I Standard	24,651
2.	,, ,, IA	8,443
3.	,, ,, I Local	4,806
4.	,, ,, IB	160
5.	,, ,, IIA	2,067
6.	,, ,, II	16,229
7.	,, ,, II Local	5,544
8.	,, ,, Rori	298

The total production of all qualities of sugars during the year 1935-36 was 100,360 bags. Classwise output was as follows:—

		Bags.
1.	Quality No. I Standard	58,649
2.	,, ,, I Local	448
3.	,, ,, II Standard	41,037
4.	,, ,, I Crushed	12
5.	,, ,, II Crushed	213

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The total output of the year 1936-37 of all grades of sugar is 85,877 bags Classwise production is as follows:—

		Bags.
1.	Quality No. I Standard	57,288
2.	,, ,, IA	18,588
3.	,, ,, IA Local	2,322
4.	,, ,, IB	67
5.	,, ,, IA L.	3,413
6.	,, ,, II	2,848
7.	,, ,, I Special	1,219
8.	,, ,, Rori	132

3. (*a*) Our factory is undoubtedly advantageously situated as far as cane supply is concerned. We are now able to run the factory for the whole season on gate cane alone. There is no other special advantage.

(*b*) We certainly have a railway station within a stone's-throw from our factory gate. We have absolutely no other facility of communication. Roads round about the factory are disgracefully bad.

(*c*) There is abundant labour supply in this district and as such we are in the same position as any other factory situated in this locality.

4. The process of manufacture of our factory is "Sulphitation Process". It is decidedly less expensive, cheaper to work, although the yield in this system is not as high as in carbonatation process in which the quality turned out is also superior.

5. We have made no changes whatever in the original plant as supplied to us by the manufacturer.

6. At the present moment it does not appear to us economic to make any further extension. If the market improves, we may put up one more pan, a few centrifugal machine, crystallizers and if possible one more boiler.

7. (*a*) The determining factor will be what is considered to be a fair amount of profit. Profits and the size are interdependent. Overhead charges and other item of expenditure are proportionately less in larger factories. Facilities of access to market and availability of raw material will be other factors.

(*b*) In our opinion now-a-days a factory of not less than 400 to 500 tons can be operated economically.

8. Almost everything has got to be imported with the exception of the ordinary cast iron material like piping, etc. Whatever little equipment is being manufactured in India is only a cheap and unreliable imitation of foreign products which cannot receive encouragement at the hands of the sugar industry. For reliable factory equipment big capital investment is necessary.

10. We do not cultivate sugarcane.

11. Same as above.

12. We do not cultivate sugarcane.

13. Same as above.

14. (*a*) The quantity of cane available since we started crushing in our factory has steadily improved. During the year 1934-35 we had to take rail cane to the extent of 16,827 maunds in addition to 1,721,471 maunds of gate cane. During the year 1935-36 the gate cane supply increased to 2,657,746 maunds and we took only 26,367 maunds of rail cane. During the year 1936-37 we have crushed only 2,270,614 maunds. We have had to take no rail cane.

(*b*) The quality of cane cannot be said to have improved to any appreciable degree. It was decidedly bad during 1934-35. Recovery figures for the various working season are as follows:—

Year.	Per cent.
1. 1933-34	9·37
2. 1934-35	8·25
3. 1935-36	9·38
4. 1936-37	9·51

15. No reliable figures can be given regarding damage from frost, disease or insects pest. From enquiries made locally, it appears that under normal corrections these causes give rise to about 20 per cent. loss of the crop. If any of these causes become abnormally persistent the losses are much higher.

16. We are certainly sure of getting sufficient supply of cane suitable and unsuitable both.

Our cane supply is predominated by suitable cane during dryer years whereas abundance of rotton cane is received during those years when there have been heavy rains. The area round about the factory is low lying and water stagnates in large proportion. Co. 213 is the chief variety of cane crushed by us in our factory.

17. Competition of other factories influenced the price of cane at our gate till last year. The cane crop itself was not enough to meet the requirements of the factories and in addition to that the factories were also crushing very much over their capacity. Both these facts put together influenced the rise in price. Last year factories as far removed as Ramkola took cane from our factory area. This year the situation has entirely changed. There being an abundance of cane, there has been a competition among the factories in trying to evade taking cane instead of trying to secure more supplies. The unprecedented fall in sugarcane price this year has been due to these facts.

18. (*a*) We have no reliable data to say whether the area under cultivation has been varying from year to year but from the data of gate cane supply, we presume that the area under cultivation has been steadily increasing from year to year.

(*b*) The steady increasing of area under sugarcane cultivation, in our opinion has been due to the fact that in this district in " Bhat " soil areas sugarcane is mostly, easily and cheaply grown and the prices obtainable leave a very fair margin of profit. If the minimum price remains throughout at 4 annas per maund in our opinion there is no other crop which can pay as much profit as sugarcane can.

19. The sugarcane production during the year 1936-37 is high undoubtedly. In our opinion as far as our area is concerned there would not have been any excess of cane crop if we would have worked on the same lines as we did last year. The situation in our opinion was aggravated this year on account of the fact firstly that Mills started working late, secondly that as everybody tried to manufacture only one grade of white sugar, the crushing naturally therefore was less. This created a surplus at that period of the year when people had grown to believe from long past practice that there should be no cane left in the field. In our opinion, therefore, there does not appear to be any necessity of restricting the area under sugarcane cultivation.

20. In the area round about the factory there are two kinds of soils one is " Bangar " and the other is " Bhat ". The difference between the two being that " Bhat " is more sandy and retains moisture longer than

" Bangar ". It is not necessary to irrigate crops on " Bhat " soil. The cost of production therefore naturally differs in each case.

Cost of sugarcane production on " Bangar " soil.

Rotation—Sugarcane, wheat, gram or peas.

	Per acre.	
	Rs.	A.
First cross ploughing during the rains	2	0
Second cross ploughing during the rains	2	0
Third cross ploughing after the rains	2	0
Levelling	0	8
Fourth cross ploughing in winter	2	0
Levelling	0	8
Fifth cross ploughing in spring	2	0
Levelling	0	8
Sowing two ploughs and eight men	3	8
Forty maunds of seeds at 3 annas per maund	7	8
After dressing 4 men	0	12
Fore hoeings 32 men	6	0
Two irrigations	10	0
Carting 350 maunds at 1 anna per maund	21	14
Manuring 10 carts	10	0
Rent	5	0
Total	76	2

Cost of sugarcane production per acre on " Bhat " soil.

Rotation of crops, early padding after ratoon of sugarcane plant cane ratoon.

	Per acre.	
	Rs.	A.
First cross ploughing	2	0
Levelling after the harvesting of paddy in September	0	8
Second cross ploughing in December	2	0
Levelling	0	8
Sowing with two ploughs—8 men cutting and planting of seeds	3	2
Price of 40 maunds cane seeds at 3 annas per maund	7	8
After dressing of sown field—2 maunds	0	7
Three ploughing during hot months	3	6
Rent	4	0
Carting 300 maunds at 1 anna per maund to distance of 8 miles	18	12
Total	42	3

21. The natural facilities of this district are such that the cultivators have practically no difficulty in the cultivation of cane. The amount of labour required generally whether in " Bhat " or " Bangar " in this district is comparatively very much less than what it is in the western districts. The only difficulty that the cultivators has is the delivery of cane to the factory. Bad roads are the greatest hinderances. Ignorance is

another reason which is responsible for a lot of difficulties arising at the factory gate. A certain lack of spirit of co-operation on the part of cultivators is very much regrettable.

22. (*a*) In our opinion the conclusion to which the previous Tariff Board came in regard to the compulsory acquisition or leasing of lands for cultivation of cane is correct.

(*b*) Zone system can be conveniently worked after a thorough cane survey is made of a particular zone and practical steps taken to ensure that there won't be any increase or decrease in the cane crop of the zone. It should also be made compulsory for the mills to confine their purchases to their particular zones only. It is also essential that every zone should be clearly and definitely marked in an unambiguous terms. It should be binding on the cultivators to sell their produces to the factory to which the zone has been ascribed.

23. The financing part of the cane cultivation is done at the present moment by private local enterprise. As far as the development of roads are concerned, if it is anybody's business, then it is factory's business. We are of opinion that even under zone system the financing part can best be left to private enterprise. Of course where there is a necessity the factory concerned may meet their requirements as the situation demands. As far as development of feeder roads are concerned, we feel that it is a legitimate function of the District Board. At the present moment all the factories are paying the District Board Circumstances and Properties tax which amounts to about Rs. 2,000 a year. One does not know where this money is spent. Roads in this district are shamefully neglected. The other day we complained about this to a responsible officer of the District Board and he said that there was no money. We do not know how far it is correct, but if that be so, we are of opinion that some sort of tax should be levied on the carts which bring sugarcane to the mill for delivery. In our opinion one pice per cart bringing cane to the factory should be realised at the time of the payment of cane price by the factory and credited to the District Board Account. It will thus bring in an income of about one thousand pice per day at a factory gate like ours which will roughly speaking be somewhere about Rs. 450 per month and the total realization for the season per factory of our size would be about Rs. 2,500. This added income can be utilized by the district for maintaining country tracks in good repairs round about 5 miles of the factory concerned.

24. (*a*) There are two different versions regarding the sugar production in this country. According to one there is overproduction whereas the other does not believe in it. Whatever may be the fact in our opinion fixing of quota for the manufacturing of sugar is most useful and necessary thing from the point of view of majority of the sugar mills. In case there is overproduction the fall in the price of sugar is natural and to safeguard interest of the mills, fixing of quota is necessary. If there is no overproduction then present fall in prices is artificial and it is necessary that ways and means for checking for such artificial fall in prices be devised. In our opinion the fall in price at the present moment is mostly due to reasons other than overproduction. It is a sort of vicious circle which started somewhere at the time of the last Abyssinian War and is continuing till to-day. Both the manufacturer and the retailer by long practice had got accustomed to the stockists whose sudden disappearance on account of huge speculative activities during 1935-36 season led to a good deal of nervousness which it appears has come to stay. The result is that the prices are steadily going down. The strong holders and large scale producers who can stand loss in comparison to the weak holders and smaller manufacturers are taking full advantage of it. If no quota is fixed the weak holder howsoever efficient will have to go and ultimately the industry will be the monopoly of a few. It is only by fixing a quota that the interest of all can be safeguarded.

(*b*) As far as erection of new factories and extension of existing one is concerned it should be stopped entirely.

25. We get mostly gate cane. The following are the figures for the comparatively small quantity of rail cane taken by us during the last few years:—

	Maunds.
1934-35—	
Gate cane	1,721,472
Rail cane	160,027
1935-36—	
Gate cane	2,657,746
Rail cane	26,367
1936-37—	
Gate cane	2,270,614
Rail cane	*Nil.*

26. Our gate cane is entirely transported by carts. The average of cane carried per cart comes to about 16 maunds. We find that some people have substituted rubber-tyred wheel carts for the old fashion ones. All such carts carry at an average of about 50 maunds of cane.

27. We have very insufficient mileage of roads round about our factory and their condition is simply pitiable. We have no pucca roads round about ten miles of our factory. Whatever we have, are crude country tracks which receive no attention whatever from the District Board.

28. The largest distance from which the cane has been brought this season is up to 20 miles but this season has been exceptional. Ordinarily it is up to a distance of 10 miles that we get our cane supply from. We think that it takes an average of about 12 to 15 hours before the cane reaches at the factory gate after cutting in the fields. There is absolutely no means of protection for deterioration during the transport.

29. The average cost of transport by cane per maund per mile is about two pies. Mostly the cane-growers have to hire carts for bringing their cane to the factory.

30. No tolls or other dues are levied on carts supplying cane to our factory.

31. Till season 1935-36 we had cane contractors to ensure the continuance and uniform supply of cane. During the last season we have had to do away with them on account of which the cane supply has been haphazard during the season. Now for the coming season we are going to have a regular cane survey and to enter into contracts direct with the cultivators. Till the season (1935-36) the normal period of the detention of the cart at our gate was less than 24 hours. This year, *i.e.*, 1936-37 has been an abnormal season in more than one ways. An abundance of cane supply and the sudden disappearance of cane contractors led to a considerable amount of confusion, thereby resulting in the detention of carts for longer periods.

36. Tramway system is advantageous only in case when the zone of a particular factory has no very distant places to cover otherwise we are of opinion that long distant tramway will not pay an average factory of 500 tons.

37. No particular data is available with regard to this.

38. Up to the season 1935-36 we purchased our entire cane through the contractors but after that we have been buying direct from the cane-growers.

39. During the season 1936-37 we could not have any regular contract with the cultivators. The supply was rather haphazard but during the coming season we are going to have direct connection with the growers for the supply of cane. Up till now we have had no request for any sort of financial assistance from the growers.

40. Refer Question 38.

41. During the season 1936-37 we took a small quantity of cane from the Co-operative Sugarcane Marketing Board, Kasia. We paid them commission at Rs. 1-2 per cent. This season being so abnormal that even their supply was haphazard.

42. We have got two gross weighbridges and two tare weighbridges conveniently situated and are worked all the 24 hours. In the beginning we started making payments all the 24 hours immediately after the delivery of the cane but soon we found that persons turn up for payment only during the day time. This dislocated our work and we were forced to withdraw our staff for the night payment and call them in the day time. Even then we found that quite a large number of people did not turn up to take their payment.

43. Different prices paid for sugarcane.

	Per maund.	
	As.	P.
1934-35—		
12th November, 1934, to 2nd February, 1935	5	0
3rd February, 1935, to 4th February, 1935	5	6
5th February, 1935, to 18th March, 1935	6	0
23rd March, 1935, to 31st March, 1935	6	6
1st April, 1935, to 3rd April, 1935	7	0
4th April, 1935, to 19th April, 1935	7	6
20th April, 1935, to 20th April, 1935	6	0

Duration of crushing—22nd November, 1934, to 20th April, 1935.

	Government rate. Per maund.		*Factory rate.* Per maund.	
	As.	P.	As.	P.
1935-36—				
15th November, 1935, to 30th November, 1935	5	6	5	6
1st December, 1935, to 31st December, 1935	5	3	5	3
1st January, 1936, to 31st January, 1936	5	0	5	0 & 5 3
1st February, 1936, to 4th May, 1936	5	0	5 6 7 6	3, 5 6, 0, 6 6, 0, 6 6, 0 & 5 6

Duration of working season—15th November, 1935, to 4th May, 1936.

Government and Factory rate.

	Per maund.	
	As.	P.
1936-37—		
3rd December, 1936, to 15th December, 1936	4	9
16th December, 1936, to 31st January, 1937	4	6
1st February, 1937, to 31st March, 1937	4	3
1st April, 1937, to 15th April, 1937	4	0
16th April, 1937, to 30th April, 1937	3	9
1st May, 1937, to 14th May, 1937	3	6

Duration of working season—3rd December 1936, to 14th May, 1937.

44. To our knowledge the price of cane does not bear any relation to the price of sugar During the crushing season 1935-36 towards the end the price of sugar was steadily falling whereas the price of cane was steadily going up. This rise in the price of sugarcane was entirely due to the competition set up by the neighbouring factory.

45. We feel that the supply of cane and the price at which it is sold to the factory is influenced by gur or khandasari sugar only when the profit of the margin in either of the two is considerably high. People have grown used to the much simpler work of cutting the cane and supplying it to the factory. They will not undertake the botheration of manufacturing gur unless there is a very substantial gain.

46. We have no regular data regarding this.

47. During the previous crushing season we have had to pay prices in excess of the minimum rates fixed by the Government. The reason for doing so were twofold: (1) Competition among the factories for the purchase of sugarcane to prolong their season as much as possible. (2) Insufficient cane to meet the requirements of the manufacturers.

A reference to the answer to Question No. 43 will give you full information in this connection.

48. The basis on which the minimum price is fixed by the Government is thoroughly unsatisfactory. They calculate the minimum price on the basis of the price of the sugar sold in the market. What actually happens is that the price prevailing during this fortnight becomes too high for the next fortnight in which fortnight the minimum price is calculated. Thus the factories have not only got to pay more price for the sugarcane in any particular fortnight but have also to meet with loss on the sugar produced from the cane purchased during previous fortnight. We are thus put to twofold loss. We feel that to minimise this loss the best way is to disconnect the cane price with the price of sugar. Cane price should be fixed by keeping in view of the cost of production of sugarcane.

Under the present condition of the industry if there is already an over-production of sugar and sugarcane there does not appear to be any necessity of introducing early and late varities of cane. Any extension of season will be uneconomic and therefore the question of bonus does not arise.

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50. *Duration of Crushing*—

1934-35 . .	22nd November, 1934, to 20th April, 1935.
1935-36 . .	15th November, 1935, to 4th May, 1936.
1936-37 . .	3rd December, 1936, to 14th May, 1937.

We are emphatically of opinion that present duration of the crushing season is economical. Any extension or curtailment cannot be justifiable.

51. Same as Question 49.

52. *Nil.*

53. During the season we employ full staff of skilled labour in Engineering as well as Manufacturing Departments of the factory. There is a fairly big staff of unskilled labour also during the crushing season but these are mostly coolies. During the silent season Engineering Department's staff is the only skilled staff we retain.

54. We employ mostly local labour. None of our skilled labour is imported from abroad and very few from other parts of India.

55. We have had no imported skilled labour.

56. We have quarters for entire labour except the coolies who come from the neighbouring villages for their duty and go back after it is over. We have got a factory club which provides indoor and outdoor games, small library and a number of periodicals and daily in Hindi, Urdu and English.

In addition to the club, we have a large size fresh water pucca swimming pool.

57. We are able to run our factory entirely on the bagasse available. We have no surplus bagasse left with us.

58. The chief by-products of the factory are molasses, press-mud, effluent water and bagasse.

59. The outturn of molasses with the price realised during the various years are as under:—

	Maunds.	Per md. at	Rs.
1934-35 . .	51,800	5·1 anna.	1,400
1935-36 . .	82,000	10·4 pies.	4,500
1936-37 . .	78,000	7·4 pies.	3,000

60. We have been selling our molasses to local dealers who have put up a sort of small establishment where they heat the molasses and after thickening the same despatch it in tins.

61. See answer to Question No. 60.

62. See answer to Question No. 57.

63. The press mud and the effluent water can in our opinion be used profitably for manuring purposes. People have already got used to the benefit of the press mud as manure. What is now necessary is that they should learn how to use effluent water also as manure. It has been noticed in some of the fields in the vicinity of the factory where the effluent water has run in a moderate quantity, the cane crop and the paddy crop have improved considerably.

64. The figures of our stock, as required, have been as follows:—

	Bags.
1933-34—On 30th September, 1934	12,682
1934-35—	
Stocks at the beginning	12,682
At the end on 30th September	4,277
1935-36—	
At the beginning	4,277
At the end on 30th September	46,622
1936-37—	
At the beginning	46,622
On 31st May, 1937	60,313

65. We have got two sugar godowns at present with us with a total storage capacity of 40,000 bags.

We are contemplating to increase our storage capacity by about 20,000 more next year.

66. No figures are available.

67. Last year we tried to recondition the damaged sugar but the experiment unfortunately was not an absolute success and so we disposed off the balance stock of damaged sugar outright.

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68. It is not possible for us to give any definite data regarding this.

69. No definite figures are available regarding damage in transit but whatever damage does happen is due mostly to leaking wagons.

70. There is always great dearth of wagons for loading sugar during this season and it was felt very keenly by almost all the factories. We have had to pay heavy allowances to our buyers on account of late deliveries. The seriousness of the situation can be gauged from the fact that we had contracted to supply the Indian Military Department and in spite of their repeated request the wagon supply was very scanty and the supply of sugar had to be delayed.

71 & 72. *Nil.*

73—76. Copy of Balance Sheet and Profit and Loss Account attached.

77. We have a cash credit account against sugar stock with the Central Bank of India, on which we pay interest at Rs. 4 per cent.

78. We do not have any Head Office separate from office of the factory situated in the factory premises. Managing Agent's commission will be found mentioned in the Balance Sheet and Profit and Loss Account attached herewith. Managing Agent's commission is determined on the net profits of the company.

79. We consider that between 10 to 12 per cent. on the original block account would be a fair return for this industry but this will mean that the share-holders will not in any case be able to get more than 6 to 7 per cent. dividend because the rest will have to be utilised for provision against the running risk, breakdown of machinery, provision for labour welfare and reserve fund.

81. (*a*) No extension of plant done.

(*b*) Works cost reduced by cutting down overhead charges considerably.

(*c*) No more efficient machinery installed.

(*d*) Measures of general economy in purchase of raw materials tools and other equipments for the mill has also reduced works cost.

82. There does not appear to be any further room for reduction of staff or other general expenses. Of course improvements of recovery rates is still possible but only with the help of further investments which may in the end turn out to be un-economic if the condition of the Industry continues to remain what it is at the present moment.

83. Our usual markets are Bombay, Calcutta and few South Indian Ports.

84. (*a*) Usually the dealers enter into the contracts with the manufacturers to buy a certain quantity of a particular brand of sugar produced by the manufacturers at a certain price mutually agreed to by both the parties either at Ready Delivery basis or at Forward Delivery basis. Usually this is what is done although some manufacturers and some dealers insist upon the regular contract terms and conditions as contained in the Contract Form of the Indian Sugar Mills Association or other conditions mutually agreed to by the parties.

(*b*) Usually the dealers sell sugar to the retailers against cash payment of price but there are some big parties among the dealers who sell sugar on credit also.

85. In our opinion the present Contract Form is fairly satisfactory.

86. No definite figures are available.

87. Same as above.

88. As far as we know 99 per cent. of the dealers have no storage arrangement.

89. The best Indian Sugar is just as good as the best Java sugar undoubtedly the keeping quality of the Indian sugar has improved.

90. Generally the Europeans and the Europeanised Indian hotels prefer Java to Indian sugar but even there high grades of Indian sugar is rapidly replacing Java Sugar.

91. Same as Question 89.

92. (*a*) 30 per cent. approximately.

(*b*) 10 per cent. approximately.

We have no definite data of the carried over stocks of the dealers. The figures given above relate to the sugar purchased by the dealers during the season but delivery not taken till after the season was over. Generally the stocks are left over in the factory. Godowns and Banks advance money up to 75 per cent. of the net value of the stock.

93. A marketing survey of the sugar industry would decidedly be of tremendous advantage. We are at the present moment in the dark regarding possibility of the Indian sugar market and unless that is known all our other activities are useless for on that will depend the improvement and the extension of cane quality and supply.

94. An All-India Selling Organization is the pressing need of industry. The present fall in prices is to a large extent due to defective selling on the part of the mills and low tactics adopted by the dealers in creating panic among the manufacturers. To eliminate these losses, it is essential that there should be one all-prevailing and all-knowing Organization.

95. Standardization is essential for the organization of sales. Its formation should best be left in the hands of experts.

96. (*a*) We have not been able to do any business on the basis of sugar standards prescribed by the Director of Imperial Institute of Sugar Technology.

(*b*) We did try to grade our sugars according to these standards but as we found it of no use, we had to give it up in the end.

97. At the present moment the price charged for the standards is prohibitively high. It is possible that they may become more useful if available at cheaper rates.

98. We are not in favour of futures or terminal market at the present moment.

99. It is very difficult to make an estimate of the consumption of sugar in India but from the facts and figures available, it can be placed somewhere in the vicinity of a million and a few hundred thousand tons. The present low prices are bound to give a rise to the consumption in this country and when one get the sugar habit it becomes permanent.

100. It is difficult to say anything in this connection as both the industries are growing. There are certain sweetmeats for which gur is particularly suited, whereas there are others where sugar reigns supreme.

101. It is not possible to give any useful information in this connection.

102. Same as above.

103. Java sugar was landed in India on unremunerative prices as will be seen from the following statements of prices *ex*-duty of Java sugar c.i.f. Calcutta:—

Date.	Price in Indian Currency per Md.		
	Rs.	A.	P.
1933—			
January to March	3	12	2
April	3	12	5¾
May	3	10	7
June	3	13	6
July	3	13	0
August and September	3	11	6
October	3	10	6½
November	3	9	1¼
December	3	4	1

Date.	Price in Indian Currnecy per Md. Rs. A. P.
1934—	
January	3 1 8
February	3 6 1
March and April 1st to 24th	3 5 1
April 25th to 3rd May	3 3 1½
May 4th to 10th	3 1 9
May 11th to 28th	3 1 3¾
May 29th to 21st June	2 15 4½
July 9th to 16th	2 15 10¼
July 17th to 30th	3 0 9¾
July 31st to 9th August	3 0 4
August 10th to 20th	3 1 3¾
August 21st to 26th September	3 0 4
September 27th to 6th October	2 13 4¾
October 7th to 10th	2 12 1
October 11th to 27th	2 13 4¾
October 29th	2 11 6
November 13th	2 9 9
November 14th	2 9 3

104. *Export of sugar (in tons)*—

Year.	By Sea. Mds.	By lands. Mds.
1930-31	493	40,126
1931-32	226	28,885
1932-33	437	27,729
1933-34	425	33,110
1934-35	363	34,034
1935-36	389	25,836
1936-37	521	23,381 (for ten months up to January, 1937).

We think export of sugar from India to United Kingdom under Imperial preference will be possible even after paying the regular custom duty in England.

105. There is absolutely no doubt that the sugar excise duty of 1934 had a steadying effect upon the entire industry. It brought boom days to a close but with all this gained it must be admitted that the addition made in 1937 has made the industry to look for a grave.

106. At the present moment molasses is generally either sold to local dealers or to Indian Molasses Company.

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107. The following are the figures of export of molasses from India:—

——	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Aden to dependencies.	13	12	11	13	..	..	..
United Kingdom .	..	..	7	179	153	..	13,620
Ceylon . .	390	658	707	890	890	925	923
Union of South Africa.	13	12	9	14	..	..	9,500
Zanzibar and Pemba	14	15	17	17	..	..	..
Other British Possessions.	13	21	13	19	..	..	..
Other countries .	..	..	..	..	110	101	140
	443	718	764	1,141	1,513	1,415	24,195

108. The extent to which the protection has been effective can best be gained from the low import figures and high production figures.

109. It is necessary that the present protection be continued for the remaining period. We cannot afford to lessen the protection to that extent where import be possible for that will kill the Indian industry. In our opinion therefore it is best to let things stand where they are.

110. In addition to protective duties for the development of industry control of sugarcane plantation with fixing of quotas and a Central Sale Organizations are other necessities.

111. The increased production of molasses in India has affected the import of molasses. It is not the duty which is responsible for it.

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(2) Letter No. 3558, dated the 22nd June, 1937, from the Jagdish Sugar Mills, Ltd.

We have to bring to your notice the following correction in reply to Question No. 104 of the Indian Tariff Board. Our answer has to be read as below:—

> "We think export of sugar from India to United Kingdom under Imperial Preference will be possible after paying customs duty in England only when it can compete with the Colonial sugars."

Ganesh Sugar Mills, Ltd., Gorakhpur.

REPLIES TO THE QUESTIONNAIRE.

Production of Sugar—Introductory.

1. The factory commenced manufacturing sugar in the month of November, 1932. The present full capacity of the factory is nearly twenty thousand maunds of sugarcane per day.

2. Our factory has been in existence for last five years only and the figures of output for these years are given below:—

Years.	1st sugar.			2nd sugar.		Total.		
	Mds.	Srs.	Chs.	Mds.	Srs.	Mds.	Srs.	Chs.
1932-33 .	54,316	12	9	54,242	0	108,558	15	9
1933-34 .	91,106	6	0	26,955	0	130,623	26	0*
1934-35 .	111,847	20	0	3,505	0	115,352	20	0
1935-36 .	208,287	36	0	252	20	208,540	16	0
1936-37 .	273,679	36	0	816	20	274,496	16	0

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* The total sugar shown in 1933-34 includes 12,562 maunds 20 seers of sugar made in gur season.

NOTE.—1st sugar includes crushed sugars also. 2nd sugars includes sugars usually called in the market as numbers 2 and 3.

3. (*a*) *Cane supply.*—Yes.

Other raw materials.—Not very advantageously situated as lime, sulphur, etc., required for manufacture of sugar have to be got from long distances.

Important Markets.—Not very advantageously situated. Our factory is far away from markets like Madras, Bombay, Calcutta, Gujrat, Central Provinces and Punjab.

(*b*) *Facility of rail.*—Yes.

Facility of road.—There is no metalled road leading to the factory. Even the roads leading to Gorakhpur are kutcha and impassable during the rainy season. Apart from this the roads round about are in a very bad condition and must be improved. It is also very necessary to construct approach roads and culverts.

Facility of other communications.—No, there is not even telephone lines. The delivery of telegrams is also delayed as there is no Government telegraph office.

(*c*) Yes.

4. Double sulphitation. We do not like to go into the question of the comparison of different processes of manufacture as we have no practical experience of any other process than one followed by our factory.

5. Originally the factory had a crushing capacity of 350 tons per day in the season 1932-33. Big extensions were made for working in 1933-34. The process of manufacture followed in the factory also underwent radical change in the same year. Minor alterations and additions have been made in subsequent years also. Details are given below:—

Extensions.

1933-34—

(1) Two mills 24 × 48 with driving engine and other accessories, *e.g.*, cush cush elevator, one engine for driving cane carrier maceration pumps cane carrier extended by 25 ft.

(2) One water tube boiler 3,900 sq. ft. H.S.

(3) One juice heater for 600 sq. ft. H.S.

(4) One sulphur oven 5 sq. ft. tray area complete with scrubber.

(5) One air compressor for the above.

(6) Two filter presses 600 sq. ft. filtering area each.

(7) Ten juice settling tanks, and several other tanks, one Eliminators.

(8) One triple effect 3,000 sq. ft. H.S.

(9) One vacuum pan 26 tons capacity

(10) One dry air vacuum pumping unit 60,000 c.ft. displacement capacity per hour.

(11) One centrifugal injection water pumping unit 150,000 gallons pumping capacity per hour.

(12) Four 40″ × 20″ water driven "Weston" centrifugals.

(13) Three crystalizers.

(14) One sugar dryer 23 ft. long.

(15) One dust collector.

(16) One sugar elevator.

(17) Several pumps required for the bigger capacity and suitable pipings.

(18) One tubewell.

These extensions were made at a cost of Rs. 3,35,460-1-11 which includes labour charges as well.

1934-35—

One generating set 45 K.W. with Switch Board was purchased. Another tubewell was also sunk; two lathes one boring machine, one shaping machine were purchased for the workshop several control instruments were purchased for the boilers.

Further improvements were made in the factory and various machineries were added here and there.

All the above cost to the Company a sum of Rs. 33,357-2-6.

1935-36—

Two water driven 30″ x 10″ centrifugals were added this year.

Magma pump, molasses pump and steam Duplex pump for driving centrifugals were also purchased.

One more lathe, Electrical Welding plant were added, to the workshop equipment. Mechanical lubricators replaced the ordinary types in the Mills.

The cost of the above came to Rs. 16,998-2-9.

1936-37—

The following machinery has been added:—

Ten belt driven centrifugals 30″ x 18″.
Five presses nearly 250 sq.ft. filtering surface eac
One juice heater nearly 800 sq.ft. H.S.
Diamond Soot blower for the boilers.
Electric Tube scaling apparatus.

The approximate cost of this is about Rs. 30,000. Final figure cannot be given as the accounts have not been made up.

6. The following machinery is on order and will be put up for operation in 1937-38 cane season:—

(1) One coil type vacuum pan 22 tons massecuite capacity.
(2) A bigger pump and for the vacuum pumping engine.
(3) One 75 K.W. generating set.
(4) One radical drilling machine for the workshop.

It is also contemplated to put up an automatic bagasse distributor and to make arrangements for replacing the sugar dryers by a sugar cooler and to put up a grasshoper with screens for grading the sugars.

7. (*a*) (1) Capital cost of the undertaking in relation to production of sugar.

(2) The supply of improved varieties of cane at the gate.

(3) Proximity to the consuming centres.

(*b*) It is very difficult to give any opinion on this question as even very big units will be lucky to make any profits under present day conditions; but under normal conditions the smallest size of an economic plant should be 800 tons daily cane crushing capacity unless the factory has got its own cane cultivation.

8. Almost complete structural work such as staging, and platforms as well as trusses for roofing can be fabricated in India. Tanks of all types including crystallisers, seed tanks, melting tanks and eliminators can also be made. Filter presses, sulphur furnaces, sugar dryers are also procurable. Cast iron work of all description as well as cast steel casting are also made.

9. (i) This institute has been in existence for a very short time but the staff of the institute appears to us to be very insufficient. This should be strengthened so that the institute may be able to extend its activities in all the directions envisaged by the Government.

Apart from carrying on the research work the institute can also give attention towards the translations of the standard books in Dutch language embodying the results of years of research and experiments carried on in Java and make these works available in the English language to the factories.

10. No.

11-13. Does not arise.

14. The following table for the gate supplies indicates the changes in the quantity of cane and quality of cane during the last five years that the factory has been in existence. The figures do not relate to the supplies received from outstations:—

Year,	Deshi.		Co. 213 and some other improved qualities.		Total.	
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.
1932-33 .	264,173	35	408,416	25	672,590	20
1933-34 .	104,636	33	1,085,303	39¼	1,189,940	32¼
1934-35 .	222,945	5	634,423	5	866,368	10
1935-36 .	68,078	0	1,425,101	0	1,493,179	0
1936-37 .	19	20	2,310,195	20	2,310,216	0

During the last season 1936-37 receipts of deshi cane were not recorded separately as almost total cane supplied was Co. 213 and other improved qualities.

15. Cane in our area has not yet been damaged to any serious extent from frost, disease or insect pest. But it is damaged by floods in certain parts. In this year about 25 per cent. of our supplies were so damaged.

16. No definite answer can be given to this question. Our factory was the first factory in this locality and the supply was never sufficient at the gate to meet our total requirements. Though the cane supplied this year was sufficient yet we cannot say if it will continue in view of the low prices.

The principal cane variety crushed is Co. 213 which had an average sucrose content of 12·1 this year. We cannot say definitely about the field yield.

17. It is only at the fag-end of the season that the price of cane is increased, due to competition. This happens only at a time when the supplies begin to diminish. The limit of the increase of price is decided by the sucrose content of cane at that time as well as the prevailing price of sugar.

18. (*a*) Yes, it has been increasing every year except in the year 1934-35.

(*b*) The increase is to be attributed to the fact that cane crop proved most remunerative than any other crop and had a ready market:—

- (i) Cane crop in this area is not affected very adversely by the excess in rainfall except in the low land tracts on the banks of the rivers which are washed away but it is affected by excessive heat as there are no irrigation facilities. Normally climatic conditions are favourable.
- (ii) The high price of sugar means a high price for cane which is a big inducement for bringing larger areas under cane cultivation.
- (iii) Prices obtainable for gur in our opinion count very little as sale of cane to the factories fetches much more than its conversion into gur. It is only in areas situated far away from the factories that the prices of gur may affect cane cultivation.
- (iv) This factor has perhaps affected the area under cane this year as the prices for other cash crops have been unusually high whereas the price for cane has been unusually low.

19. The production of cane in our area was not in excess of our requirement and we do not consider any restriction necessary.

20. We have no information on this point.

21. The main difficulties of the cane-growers in this area are as under:—

(i) Want of irrigation facilities of any kind whatsoever.
(ii) Ignorance of the knowledge of scientific methods of cultivation.
(iii) Want of funds.

The first of these can be remedied by a system of the tubewells sunk by the Agricultural Department from which water could be supplied to cultivators on payment.

The second difficulty can be overcome by the dissemination of the methods of scientific cultivation by means of demonstrations farms, holding of small rural exhibitions accompanied by shows of educative slides and explanatory lectures in simple language, issues of illustrated leaflets and general propaganda.

The third difficulty could be met by the establishment of Co-operative Banks which might provide the necessary money for financing the crop.

22. (*a*) We agree with the conclusion of the Tariff Board that the compulsory acquisition of land for cane cultivation by factories is impracticable.

(*b*) We are strongly in favour of allotting special areas to different factories for the supply of sugarcane. This will result in the development of these areas by the factories with the help of Government on suitable lines. At present supplies from the same area can go to the different factories and hence none of them takes any interest in their development as the benefits of the efforts of one factory may be reaped by another in case the supplier is induced by the other factory to take his supplies to it instead of to the factory which spent labour and money in development. It is true that allocation may not be possible in congested areas. But this should be no reason for dropping the question altogether. In fact areas could be allotted to the interested factories jointly where separate allocation is not possible. In any case, in our opinion, the system of zoning could work nicely if worked out with the co-operation of the factories, keeping in view all the local conditions.

23. We would be prepared to give assistance to cultivators to a considerable extent in all the directions in order to ensure supplies of fresh canes of improved varieties provided it is made penal for the growers of our zone to sell their cane to anybody else. If this is not done the cultivators will take the advances from us and sell their cane secretly to others in order to avoid the repayment of the loans.

24. (*a*) The question of the fixation of quota may be considered only after the construction of new factories has been checked otherwise it would be very unfair to fix the quotas for the existing factories on the one hand and to allow the construction of the new factories on the other. If further constructions are checked and it is still found necessary to fix the quotas on account of overproduction we will have no objection to the same provided it is done with the consent of the factories keeping in view their capital cost, equipment, and other conditions.

(*b*) (i) We are strongly in favour of the licensing of new factories and are convinced that this is very important for the success of any marketing scheme.

(ii) We are not so strongly in favour of this as the measure of improvement may be taken for extensions and these should be encouraged.

25. The proportions of gate cane and rail cane are given below. We have no tram-borne cane:—

Year.	Gate cane.	Rail cane.
	Per cent.	Per cent.
1932-33	52	48
1933-34	85·8	14·2
1934-35	67·8	32·2
1935-36	58·3	31·7
1936-37	81·4	18·4

The proportion of gate cane has been increasing every year with the exception of 1934-35. The increase has been due to the reasons given in reply to Question 18 (*b*).

26. Our gate cane is entirely transported by carts. The average weight of cane carried per cart is nearly 16 maunds. It is possible to substitute the ordinary carts by the rubber-tyred carts in some cases only as they are too expensive and the maintenance is difficult. Moreover the roads are very bad. Hence it is problematical whether the rubber-tyred carts will last very long. We have not employed any improved type of carts for the transport of cane.

27. Mileage of roads seems to be adequate; but the condition of main and feeder roads both is awfully bad.

28. The distance varies up to 20 miles. The time taken in cutting the cane and delivery at the gate also varies up to three days.

No care is taken to protect the cane from deterioration during road transport.

29. This varies according to the distance the cane comes from. No fixed rate per mile can be given as the minimum charge is 6 pies per maund except in very exceptional case when it may be 3 pies per maund. All the cane-growers do not have their own carts and many have to hire them. The hire is calculated per maund of cane carried.

30. The cane carts which pass the District Board as well as private ferry bridges have to pay tolls according to the schedule.

31. None in particular.

The normal period of detention varies between 12 and 24 hours in the early months of the season but is reduced later on.

It is very difficult to regulate the supplies at the starting of the season as the cultivators are in a hurry to sell a portion of their canes and to get some money to meet their requirements. In the later months of this season we tried the experiment of fixing different week days for taking the supply of cane on gate from different directions. We have four main roads leading to the factory. Supplies on these roads are not uniform. We allotted fixed week days to the roads and advertised the same very widely. Thus every day we were getting supplies from one road only. This experiment was fairly successful and resulted in the delivery of fresher cane and a speedier release of carts.

32. Major portion of our rail supplies comes from stations within 40 miles of the factory; but in past years we took canes from longer distances as well. The time taken in transport differs according to the distances, as well as the regulation and control of supplies by the purchasing agents. Normally, with good arrangements, the time should not exceed two days.

Railway arrangements for transport are not very satisfactory and could be better especially in the case of supplies which have to pass through a junction. Moreover the railways do not have enough rolling stock to meet the requirements of the factory and except in the season 1936-37 they never complied with the indents of the factories in full in the last months of the season.

33. Railway freights are fixed for different types of wagons according to their carrying capacity and the distance subject to minimum rates. There have been no important changes in the rates in recent years.

34. No.

35. *Nil.*

36. Yes.

There are bound to be initial difficulties in laying out the tramway system on account of the natural unwillingness of the tenants to part with their lands which may be required hire and there for the tracks but this can be overcome by means of acquisition.

37. Sugarcane is a very perishable raw material and begins to deteriorate very quickly after cutting.

The degree of deterioration differs in different months, the losses being much greater in the later months of the season when days become longer and warmer. The cane not only loses in quality but also in weight.

Some experiments made have shown that it loses in weight by about 3·5 per cent. on the first day, nearly 3 per cent. on the second day and 2 per cent. on each of the third and fourth days and 1·5 per cent. each day thereafter.

As for the quality, drop in purity on the first day is almost negligible but is quite a lot in succeeding three days after which the rate of drop decreases.

38. We purchase all our gate cane direct from growers as very negligible quantity is arranged through canvassers but the payment for this is also made to the growers.

39. We had been giving advances in cash to the tenants but as their realisation had always been very difficult we are thinking of giving up the practice.

40. Please refer to our reply to Question No. 38. We pay sliding rates of commissions to canvassers. The rates differ for supplies arranged by them from different areas according to distances and in different months.

41. No.

42. Cane is weighed on weighbridges made by Messrs. W. & T. Avery. After the tare is taken on another weighbridge of the same make, the cultivator is given a receipt for the cane supplied by him and is paid immediately on presentation of the receipt at payment office which is open all the 24 hours, during the season.

43. The following table gives the cane purchase prices:—

Years.	Per maund.	
	As.	P.
1932-33	6	0·28
1933-34	5	4·64
1934-35	5	11·16
1935-36	5	7·89
1936-37	4	3·87

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The above prices are average prices for both rail and gate cane delivered at factory and include all charges and expenses.

Up till last year the prices always rose during the latter half of the season. This year they have been going down.

44. The minimum price payable for cane is fixed fortnightly by the United Provinces Government and is supposed to bear a definite relation to the average price of sugar.

45. The supply of cane from the area round about the factory is not affected by the price of gur or khandsari sugar; but the supply of cane coming from distant areas and subject to the payment of high transport charges is influenced by the price of gur. This results in the payment of higher prices for total cane supplies.

46. There is hardly any manufacture of gur in our area.

47. The following table shows the price paid by the factory as well as the Government minimum price during 1934-35 and 1935-36 during the periods of excess payments:—

1934-35.

Periods.	Prices paid.		Government minimum price.
	As. P.	As. P.	
1st February, 1935	5 0	5 6	Always As.
2nd February, 1935	5 6	6 0	
3rd February, 1935, to 10th February, 1935	6 0	...	
11th February, 1935, to 13th February, 1935	6 0	6 0	
14th February, 1935, to 28th February, 1935	...	6 6	
1st March, 1935, to 5th March, 1935	...	6 0	
6th March, 1935	6 0	7 0	
7th March, 1935, to 25th March, 1935	...	7 0	

1935-36.

Periods.	Prices paid.	Government minimum price.
	As. P.	
17th January, 1936, to 8th March, 1936 .	5 3	Always As.
10th March, 1936, to 18th March, 1936 .	5 6	
20th March, 1936, to 11th April, 1936 .	5 9	
12th April, 1936, to 15th April, 1936 . .	6 0	
16th April, 1936, to 18th April, 1936 . .	6 6	
19th April, 1936	7 0	
20th April, 1936, to 24th April, 1936 . .	8 0	

The reason of the excess payment was the general shortage of supplies and the consequent competition between the factories.

48. No.

At present the minimum prices fixed by the Government bear a relation to the prices of sugar only and do not take into consideration the sucrose content of the cane at all. This is highly improper.

A suitable formula for the fixation of cane prices which takes into account both factors has yet to be found out. Another question to be considered at the time of fixation is that of gate cane and rail cane. The minimum price should be understood to apply to the cane delivered at the factory only and should be subject to the reduction of the transport charges in case cane is purchased from outstations.

49. The question of introducing a system of "bonus" payment for superior cane will not arise in case the prices bear regulation to the sugar content as well.

As for early and late varieties of cane this system can be introduced.

50. The following table shows the duration of the last five crushing seasons:—

Years.	No. of days.
1932-33	167
1933-34	156
1934-35	119½
1935-36	157½
1936-37	172

In normal years with higher sugar prices a duration of 210 days will be enough for economical working.

51. This will depend upon the successful introduction of the late and early ripening varieties of cane in which case the season can be extended provided new outlets are found for sugar.

52. We have not much experience of this.

Labour.

53. The following table will show the class and the number of workers we employ:—

Crushing season.		Silent season.	
Class of worker.	No.	Class of worker.	No.
Highly skilled (Manager, Head of the Engineering and Manufacturing Department; and their immediate assistants, pan-boilers and laboratory chemists.)	26	(The rest of the members of permanent staff get retaining salaries for this period.)	7
Skilled (Head mistries, fitters, drivers, boiler attendants, electricians, blacksmiths, moulders, turners, carpenters, masons, evaporator men, juice supervisors and centrifugal supervisors.)	114		72
Semi-skilled (Oilmen, khalasi, coolies, pumpboys, firemen, filter coolies and apprentices, hammermen, sulphur coolies.)	88		77
Unskilled (Coolies.)	650		170

NOTE.—Numbers given vary from time to time but the figures may be taken to relate to average conditions. Apart from the above we also have a staff in the office and cane department, etc.

54. We had to engage Chinese pan boilers imported from Java from 1933 to 1936. Now they have been replaced by Indian pan boilers who were trained by the factory on the same lines.

55. Two non-Indians are employed—the Chief Chemist and the Chief Engineer who are both Dutch men. The rest of the staff is Indian.

56. The factory has got about one hundred quarters, most of these semi-skilled and unskilled as well as a number of skilled workers live in their own villages. The rest are all housed in good pucca buildings.

Free medical attendance, light and fuel are provided. Factory also maintains a primary school for the children, as well as a library and reading room. Sanitation is carefully watched and liberal supply of pure drinking water has been arranged.

Power.

57. We had to supplement the bagasse with wood and coal for meeting the total requirements of fuel. The quantities differed in different years. The following table shows the amounts spent on fuel for last five years:—

Year.	Rs.	A.	P.
1932-33	31,661	11	9
1933-34	43,305	2	9
1934-35	28,159	2	9
1935-36	39,562	8	9
1936-37	about 14,000	0	0

The remarkable improvement in the season 1936-37 was due to the alteration in our boiler furnaces.

We did not bale our surplus bagasse yet as the question did not arise but we contemplate doing it next year.

By-products.

58. Molasses, bagasse and press mud.

	Years.	Quantity produced. Maunds.	Price obtained. Rs.	A.	P.	
59.	1932-33	53,428	3,067	6	3	
	1933-34	67,950	4,036	0	9	
	1934-35	41,915	3,367	4	0	
	1935-36	74,477	8,026	0	9	
	1936-37	103,957	6,710	11	6	up to 31st May, 1937.

The higher amounts fetched in the years 1935-36 and 1936-37 were due to the greater outturn of molasses.

60. Our molasses has got a market in Bengal where they mix it with tobacco. Some quantity is also sold locally. We usually do not send molasses to Bengal or any other place on our account but the dealers send it themselves. Usually they concentrate the molasses before despatching as it saves railway freight which is too high in comparison with the cost of the commodity.

Railway facilities are not at all adequate. The supply of suitable tank wagons is utterly lacking. The Bengal and North-Western Railway have some tank wagons for molasses but they seem to be under an agreement with the Indian Molasses Company which controls the supply of these wagons.

61. We have to distribute the molasses free of cost to the villagers and have also to throw away a portion of the produce every year.

Molasses can be utilized in the production of power alcohol for use as motor fuel but it would be necessary to introduce legislation making it compulsory to mix power alcohol in certain proportion with petrol.

62. Does not arise.

63. Bagasse and press cake could probably be put to better uses but research work is necessary.

Storage and transportation of sugar.

64. The following table gives the stock of sugar in our factory at the beginning and end of the last five crushing seasons:—

Years.	Beginning. Mds.	End of season. Mds. Srs.
1932-33	...	31,337 20
1933-34	...	40,485 0
1934-35	...	49,842 20
1935-36	...	82,980 0
1936-37	2,492	130,828 20

65. Sugar is stored in pucca godowns which have got water proof corrugated iron roofing. The floor is pucca. A thin layer of sand about two inches thick is spread on the floor. Scantling or slippers and mats are placed on the sand layer after which sugar bags are piled.

The present storage capacity of our godowns is nearly 45,000 bags. The capacity was increased by 8,000 bags this year and further extension to store nearly 400 bags have been made now.

66. Not to a very great extent. Though the bottom bags usually become damp in the rainy season on account of the rise in the water level, our sugars have not been deteriorating. Lower grade sugars have been more liable to deterioration. The deterioration of sugar also depends on polarisation, glucose and moisture content and the right pH.

67. Usually we have been selling it at cheaper rates.

68. Keeping quality of sugar is certainly capable of improvement. Bigger grains of better quality will keep longer.

69. A lot of damage is caused to the sugar in transit especially during the monsoon. The wagons supplied by the railway company are not of a good design as water can go inside them through the doors. Apart from this the greatest damage is caused at the transhipment centres where the railway companies do not have proper arrangements of storage pending its loading into other wagons.

70. Yes, there is always trouble in obtaining wagons during the crushing season as railway company does not have enough rolling stocks to meet the requirements. Delays of over a month are matters of every day occurrence. This has resulted in late deliveries of sugar to the markets and consequent trouble with the dealers especially in the falling market.

Further, the transportation can be quickened and earlier delivery effected if the railways were keen about it.

71. Please refer to our reply to Question No. 69. Apart from the improvement in the type of wagon a better supervision at the transhipment centres accompanied by better storage accommodation there is necessary.

72. Below is given a statement showing the prices at which during the last five years, the products of this factory have been sold:—

Years.	Period.	Price. Rs. A. P.
1932-33—		
	October	9 13 0
	November, December and January	9 10 0 to 9 8 0
	February to 15th March	9 0 0 to 8 14 0
	16th March to the end of season	8 14 0 to 8 10 0

Years.	Period.	Price.
		Rs. A. P.
1933-34—		
	July to September	9 8 0
	November to December	8 8 0
	January to February	8 0 0 to 8 4 0
	March	8 4 0 to 8 10 0
	June (last week)	8 8 0
1934-35—		
	July to October	8 8 0 to 8 10 0
	November and December	8 0 0 to 7 13 0
	January (first three weeks)	8 0 0 to 8 4 0
	Last week up to	8 14 0
	February to June	8 8 0
1935-36—		
	July to September	8 8 0 to 8 10 0
	December	8 12 0 to 8 2 0
	January and February	8 2 0 to 8 3 0
1936-37—		
	April	6 3 0 to 6 0 0
	May	5 15 0 to 5 12 0
	June 1st week	5 12 0 to 5 13 0

The above prices relate to first sugar only. We have not given the prices of second sugar as we have stopped its manufacture for the last four years. There is no difference in our prices for ports and up-country centres.

Below is given a statement of the freight rates to the markets we supply:—

Names of places.	Amount of freight. Rs.	A.	P.
Wadibunder	1	1	0
Calcutta	0	15	0
Amritsar	1	6	3
To *viâ* Saharanpur	0	14	10
Viâ Cawnpore	0	8	3
Ahmedabad	1	6	6
Cambay	1	4	10
Karachi	1	1	6
Viramgam	1	3	10
Katni	1	0	5
Bilaspur	1	8	0
Raipur	1	10	7
Madras	1	1	0
Tuticorin	1	3	2
Cochin	1	3	4
Calicut	1	2	10

Capital Account and Overhead Charges.

73. Balance Sheets for the last four seasons are attached.

74. The following table shows the amounts written off for depreciation. Particulars of the amounts under separate heads will be found in Balance Sheets.

Our rates of depreciation are very nearly the same as allowed by the Income-tax Department—

Years.	Amount. Rs.	A.	P.
1932-33	67,589	2	1
1933-34	84,458	8	1
1934-35	74,319	4	9
1935-36	86,911	8	9
1936-37	Accounts will close on 30th June, 1937.		

75. The following amounts have been set aside for Reserved Fund:—

Years.	Rs.
1932-33	...
1933-34	40,000
1934-35	...
1935-36	95,000
Total	1,35,000

76. We have only one class of shares namely Ordinary Shares and have declared the following dividends:—

1932-33	10 per cent.
1933-34	*Nil.*
1934-35	*Nil.*
1935-36	10 per cent.

77. Working capital is provided either by the Managing Agents or by a bank on pledge of sugar stock. We are able to borrow at 3½ per cent.

78. The following table shows the head office expenses as well as the Managing Agent's Commission paid during the last four seasons:—

Years.	Head office expenses.			Managing Agents commission.		
	Rs.	A.	P.	Rs.	A.	P.
1932-33 . . .	12,434	6	3	18,741	6	0
1933-34 . . .	11,981	1	5	16,243	0	0
1934-35 . . .	11,924	6	6	5,873	15	3
1935-36 . . .	11,404	3	6	37,562	0	10

Managing Agents get a commission of 10 per cent. on gross profit.

79. 10 per cent.

Efficiency of Production.

81. Reductions made in the working cost will be clearly seen from the figures given in Form (ii) under Question No. 80.*

Reductions have been possible by extension of the crushing capacity which resulted in reduction of overhead charges. Quite a good saving was effected this year in the item 2 (*a*) (Power and fuel). This was due to a more efficient installation.

82. There is very little room for further reduction of works cost in our case.

The average recovery can certainly be improved much by the supply of better cane and also a little by more efficient work in the factory and that will ultimately go to the reduction of works cost.

Marketing.

83. Cawnpore, Bombay, Karachi, Ahmedabad, and towns in Gujerat, Madras Presidency including Tuticorin, Cochin, Calicut, and other South-eastern Coastal ports, Central Provinces.

84. (*a*) The sales are made through the selling agents engaged on commission basis by us. In case of direct sales to the dealers we take an advance of one rupee per bag from them before despatch. The railway receipts and documents are in all cases forwarded through our bankers for collection.

(*b*) The dealers sell the goods to the retailers on credit to approved customers and against cash to others according to the arrangement.

85. Yes.

86. We have no pucca figures except in the case of our sugars.

87. Not very much.

88. Big dealers have their own godowns. Smaller dealers get their supplies from them and have no special arrangements for storage.

We cannot say definitely about the extent of deterioration.

89. Yes, on account of the inferior quality and methods of storage Indian sugar deteriorates more rapidly than Java sugar.

Yes, the keeping quality of Indian sugar has improved with the improvement in quality.

90. Java and other refined sugars are still preferred by people of fastedious tastes only.

91. In several cases the quality of Indian sugar can compete with that of Java sugar. It is not yet equal to British refined sugar. Indian sugar is not inferior to Java sugar in colour but it still lacks in uniformity lustre and the size of grains.

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* Not printed.

92. Major portions of the stocks are carried by the manufacturers. The carrying of stock is generally financed by the banks which advance up to 75 per cent. of the market value of the sugar in stock at reasonable rate of interest.

93 & 94. Yes.

95. Yes. Valuable work in this direction has been done by the Bureau of Sugar Standards and the practice followed in issuing separate standards for colour and grain seems to be workable.

96. *Nil.*

97. No.

98. A Central Sugar Marketing Organisation on the lines of the NIVAS of Java must be immediately established in order to undertake the distribution of sugar to the various markets on scientific lines. This is by far the most important point which needs solution. The present sugar selling arrangement is highly wasteful. It is admitted on all hands that the conditions of the sugar market at present are almost chaotic. There is no confidence. Prices have touched ridiculously low levels due to the (i) almost unrestricted competition and the scramble for selling the sugars by the factories. These conditions cannot be allowed to go on if the industry is to survive and the only solution is the immediate establishment of a Central Marketing Organisation for controlling the sale of the produce of all the factories on lines beneficial both to the producer as well as the consumer by minimising freight charges, etc., and other methods.

The establishment of a 'futures' or 'terminal' market may also help the industry, but that may be left to the sugar trade.

99. It is very difficult to give the correct figure of the consumption of sugar in India. The consumption is not steady and rises with the fall in the price of sugar. In our opinion the annual consumption of sugar at present may be safely taken to be 11 lakhs tons.

As for possibilities of increasing consumption, in our opinion, there is still a great hope. *Per capita* consumption in India is very small as compared with most of the countries of the world and is bound to increase with the improvement in the economic condition of the people of the country.

100. It is difficult to give actual figures but sugar is replacing gur in the sweetmeat trade to a certain extent only.

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101. We cannot say.

102. We have no pucca figures.

103. We cannot give definite figures.

104. There has been no export by sea except to Burma. The export by land has been to Nepal.

As for possibilities of export it does not appear as if there is much a scope at present. The question of export is related to world sugar economy and present intricate problems about worlds production and consumption, the policy of various countries, their tariff, etc.

In the face of all these factors we can only look to the United Kingdom to follow the policy of Imperial Preference and charge lower duties on Indian sugar as compared with non-Empire countries.

United Kingdom imports huge quantities of sugar and offers a potential market for Indian sugar. That is the only possibility of export in our opinion, at present, and it should be fully explored.

105. (i) The effect of the sugar excise duty of 1934 was a check on the further erection of sugar factories for the time being.

The levy of the excise duty, however, came at an inopportune time as the industry was yet in its infancy and had not been able to set its house in order; conditions were disturbed on account of the sudden rise in the number of factories and technical men of requisite experience were not available to meet the demand. Most of the factories had to recruit and work with men new and untrained staff. These conditions were not conducive to efficiency and so the factories could not reap full advantage of the protection during the brief period of their existence and did not get any opportunity to create suitable reserve funds or to make themselves more efficient.

(ii) As for the addition to the excise duty made in 1937, we have to say that the condition of the industry did not justify the measure at all. The increase has resulted in serious losses both to the factory as well as to the agriculturists. The former had to bear the burden of the duty alone as the prices to-day are even lower than what they were before the increase. The cultivator has suffered because he got a lower price for his cane on account of the low sugar price.

106. Please refer our reply to Question No. 60.

107. The Indian Molasses Company exports molasses outside India. We cannot give the details.

Claim for Protection.

108. The protection granted to the Indian sugar industry has been effective to an extent not foreseen by even the most optimistic and powerful exponents of the Protectionist policy. The progress has been simply magnificent, the number of sugar mills has increased from 32 in 1931-32 to nearly 150 in 1936-37. The production of sugar has increased from 478,119 tons in 1931-32 to nearly 1,100,000 tons in 1936-37 which is more than the estimated annual consumption of India. The acreage under sugarcane has increased from 307,600 in 1931-32 to 443,100 in 1936-37 which means that the cultivator has benefited from the policy of protection which has enabled him to receive a better price for cane than other crop. These results are far beyond the expectations of the Tariff Board.

The protection has also stopped the drain of the huge sum formerly paid for Java sugar and this amount now remains in India and the advantages are shared by the factory owners, cane-growers, employees of the factories, railway companies engaged in the transportation of both cane and sugar, and the country cart-owner.

The protection has also been effective inasmuch as the factories have increased their efficiency and reduced their works cost per maund of sugar considerably.

The average percentage of recovery was 9·29 in 1935-36 as against 8·89 in 1931-32 whereas the highest in 1935-36 was 11·34 against 10 in 1931-32. In fact the factories have exceeded the expectations of the Tariff Board during a period of five years.

The high efficiency now attained by the Indian sugar factories has resulted in the supply of sugar at much cheaper rates. In fact our sugar price is cheaper to-day than the price visualised by the Tariff Board at the end of the protection period, *i.e.*, 1946.

109. The rate of protective duty should not be altered for the remaining period of protection as it will have a tendency to disturb the equilibrium of the market and may affect the price of Indian sugar.

110. The industry requires Government assistance other than the protective duty in directions more than one and these are discussed below:—

(1) Provision of adequate funds for constant research work in improving the quality of cane and increasing the tonnage of cane per acre so that sugarcane of better qualities may be available at a cheaper rate without any loss to the growers.

(2) Demonstration of improved methods of farming manuring and irrigation, etc., to the cultivators on their own land as widely as possible. This will require the employment of trained field men.

(3) A series of Government demonstration farms and nurseries for the supply and propagation of cane seed of better varieties with responsible officers to supervise the work of fieldmen engaged for

demonstrations on the land of the cultivators themselves as well as to serve as centres for the dissemination of information concerning improvements and arranging propaganda work.

(4) Provision of suitable irrigation facilities. This can be done by constructing state tubewells and supplying water on payment.

(5) Improvements of the condition of existing roads, construction of new roads and laying of tramway lines are necessary measures for quicker transport of sugarcane and the consequent higher recovery.

(6) Introduction of system of zoning for cane supplies.

(7) Statutory recognition of the Indian Sugar Mills Association so that this body may be able to work on the same line as the Indian Central Cotton Committee.

(8) Control of the production of sugar, imposing legal restriction on further erection of factories except by license.

(9) Immediate formation of a Central Marketing Board with statuary powers.

(10) Facilities for the utilisation of molasses in the production of power alcohol for use as motor fuel and suitable legislation making it obligatory to mix the same with petrol in a certain fixed proportion.

(11) Research work to find out a better use for bagasse and press mud.

(12) Lower railway freights for the transport of sugar and sugarcane as well as other materials for example lime and gunny bags.

111. We cannot say.

The Campierganj Sugar Mills, Ltd., Gorakhpur.

(1) *Letter No. 3146/36-37, dated the 17th June, 1937.*

We have the honour of enclosing six copies of answers to the questionnaire issued by your board as desired by you.

We would particularly draw your attention to Question No. 105 and to the answer given in our reply to it.

When the Tariff Board were touring in the United Provinces they visited two of the larger factories in the Gorakhpore District. But we may have the pleasure of a visit from you when the Tariff Board returns through this area. This will give you some idea of what the small factories are like and of our difficulties.

There is a similar factory to this at Pipraich and a visit to either this factory or to Pipraich would be welcomed and we would feel that our size of factory would be considered when your Board makes its recommendations.

Enclosure.

REPLY TO TARIFF BOARD QUESTIONNAIRE.

The Production of Sugar—Introductory.

1. (*a*) 1934.

(*b*) Capacity 250 tons per day.

		No. I.		No. II.
		Mds.	Srs.	Mds.
2.	1934-35	24,550	0	14,790
	1935-36	55,852	20	30,540
	1936-37	68,747	20	30,035

3. (*a*) The factory is conveniently situated for cane supplies and for east United Provinces markets, but badly for coal and lime. Firewood is plentiful.

(*b*) Transportation facilities are good.

(*c*) Sufficient labour is available.

4. The process used here is sulphitation. Excessive landed cost of limestone and coke and extra cost of plant are the drawbacks of the carbonitation process for this factory. The advantages of the carbonitation process are (1) a better quality of sugar, (2) better keeping qualities, and (3) increased recovery.

Sulphitation sugar has not the same keeping qualities as carbonitation sugar and the recovery is lower, but the cost of plant and of production is lower also.

5. In 1935-36 the plant was extended to crush 250 tons per day from 150 tons. This necessitated the addition of:—

(1) Two mills.
(2) One mill engine and gearing.
(3) Tubewell 6″.
(4) Increase in vacuum engine and condenser sizes.
(5) One calandria pan dia. 7′.
(6) 4—18″×30″ water driven centrifugals with necessary pumps conveyors, etc.

Note.—Necessary structural alterations were made for above. The total cost was approximately Rs. 1,28,000.

6. No extensions are contemplated at present.

7. (*a*) (1) The capital available.

(2) Cane supplies, present and future.

(3) Size that can be operated without expensive supervision and high overhead costs.

(*b*) The situation of a factory with regard to markets makes a big difference as to the smallest size capable of being operated profitably. If a factory is near a large market and can sell its output locally then the higher prices obtained will permit a 100-ton factory to be operated profitably. The main condition, however regulating the profitable working of a small factory is for it to produce the major portion of the cane it requires on its own farms and to keep the cost of such production much below the rate for cane as fixed by the authorities. If this is done then a 200—300-ton factory can be operated successfully almost anywhere, and this is about the usual minimum size that can be considered as an economic proposition.

Raw Materials.

10. We grow about 35 per cent. of our cane requirements.

The land is on lease. High rentals are a drawback.

11. (*a*) 1,640 acres.

(*b*) 750 acres including ratoons.

(*c*) Co. 213 exclusively.

(*d*) Trenching with irrigation, one quarter of total area is followed each year. Rotation has been:—

¼ area planted cane.
¼ area ratooned.
¼ area other crops.
¼ area fallow, followed by cane.

Green manuring is being done to 300 acres annually and artificial manures applied. 100 acres are manured by cattle dung, etc., and with filter press mud. Molasses will also be used in future.

12. (*b*) Seed is distributed to cultivators whenever required by them and in quantities suitable to their needs.

14. (*a*) The quantity of cane available to factories has increased enormously in the last seven years. In fact last season all this factory's requirements were satisfied by cart cane except for a very small amount of rail cane.

(*b*) The quality has not improved much.

15. It is not possible to assess the damage done to cane by frost disease and insects. The loss caused by white ants is great in some areas. In some years frost does enormous damage. Insect pests are unchecked and no measures for the extermination of these pests have been adopted on any scale up to the present. The attitude of all concerned seems to be to "sit tight and trust in providence". An active campaign is necessary to keep in check insect pests as it is futile to attempt to reduce this evil by experimenting on small patches.

16. Yes, our cane supplies are assured but no definite statement can be made as to quality or quantity till September of any year owing to the danger of flooding during the monsoon.

17. In a year of cane shortage the price of cane will rise. It has been as high as 12 annas in 1931-32 at the latter end of the season. The writer has known it to be as high as Re. 1 per maund for a short period before protection was granted to the sugar industry.

19. There is no excess in this area and no restriction is necessary.

20. NOTE.—In this estimate the cultivator's labour is allowed for though in practice he does not consider the time he spends at his cultivation in a money sense, as he relies on his crop for reimbursement, and usually has no other work to do but to cultivate his land.

	Rs.	A.
1. Rent for 3 crop periods	6	0
2. Ploughing 4 times at As. 8	2	0
3. Seed cane 40 maunds at As. 5 per maund	12	8
4. Fertilisers	19	0
5. Hoeing three times at Re. 1 per maund	3	0
6. Cane planting labour	2	0
Total	44	8

(*a*) The average return is 400 maunds per acre with artificial manure.

(*b*) 200 maunds without. This makes the cost of cane per maund:—

(*a*) Anna 1-9·3.

(*b*) As. 2-0·5.

21. Transport is the main difficulty in the way of cane-growers. The cost of transporting cane to the factory is high and if the grower is say 10 miles from a factory then his cost is equal to that of his production, *i.e.*, As. 2 per maund. Good roads permitting of high speed and heavy motor transport, or light tramways are remedies. These however are not feasible now as the cane purchase price is fixed and transportation would be an additional burden on factories.

22. I agree with the previous Tariff Board's finding and (*b*) think that each factory should be allotted a zone. This however is now going to be extremely difficult to do without injuring some factories because—

(1) of their large requirements,

(2) two or more factories at the same station, and

(3) the sheep habit of newcomers in the industry causing over-crowding in certain areas.

If these difficulties can be overcome then "Zoning" would be an excellent thing. A common cane purchasing system for groups of factories for all cane other than gate cane would make zoning possible.

23. This factory is not in such a financial position that it can expend anything on grants, cash advances, or roads. If sugar prices permit of a profit being made then naturally grants for the development of the zone would be possible.

24. (*a*) A fixed quota for sugar to be manufactured by each factory would be a very excellent thing but is not feasible under the present system of cane-growing as the hardship to the cane-grower would probably be very great. If a comprehensive survey of suitable cane-growing lands was made and a definite area only permitted to be planted with cane under a license system, then restriction without injury to the cultivator would be possible.

(*b*) (1) All factories should be licensed, existing and contemplated. No factory should be allowed to be erected at a less distance than 10 miles from an existing factory unless for some very special reason. This would be one way of "zoning".

(2) Extensions should be permitted as a large number of factories were originally built small owing to lack of funds and with the idea of expansion when capital become available.

25. (*a*) Gate cane 93·89 per cent.

(*b*) Rail cane 6·1 per cent.

(*c*) Tram-borne cane *nil*.

The increase of cultivation in our farm and local area has proved ample for our requirements and rail cane is not needed now in normal seasons.

26. Only carts are used for gate cane transport. The average weight of cane carried per cart is 14 maunds.

27. All roads are in a bad state. The mileage is ample.

28. The farthest distance cane that is brought by carts is 16 miles. The time between cutting and delivery at factory is 23 hours. In this period there is no noticeable deterioration of quality.

29. Cost of cartage is 2 pies per maund per mile. Some growers own carts and do their own carting. Others have to pay the usual rate given above.

31. As the quantity of cane required by us is 8,000 maunds daily and as our own farm supplies 3,000 maunds more or less of this cane, our arrangements are not extensive. The arrangements are:—

(1) Our area is divided into 7 plots.

(2) A man of standing is appointed in each area as a supervisor.

(3) A register of all cane-growers and carters is prepared in September-October when as accurate a survey as possible of cane likely to be available is made.

(4) The areas are then allotted a certain number of carts daily in accordance with the amount of cane in each area.

(5) The carters are given passes daily and only carts with valid passes are taken into the factory.

(6) The area supervisors are responsible for equitable distribution of passes and for cutting of cane.

(7) A Cane Superintendent and two assistants are responsible to the Manager for cane supplies being fresh and also for continuous supplies.

(8) No cart is detained at the factory for longer than six hours except in cases of machinery trouble.

36. A tramway is certainly advantageous. The cost in this area of a tramway would be heavy and as there are forests close by, it may not be possible to obtain permission to pass through them or cut the unnecessary trees.

38. (*a*) All cane is purchased from the growers direct and we have no contractors.

39. We do not give cash advances to cultivators, but supply manure and seed, if required, and treat the costs as advances.

42. 2 cane weighment men and one supervisor are on duty on each shift. Cane is weighed during the full 24 hours. Cane is paid for the same day that it is weighed in and payments are made for 12 hours daily, *i.e.*, during the night 6 P.M. to 6 A.M. no payments are made.

43. Average cane price in year—

	Per md.	
	As.	P.
1934-35	5	5·6
1935-36	5	6·4
1936-37	4	3·6

44. The price of cane is fixed by the Provincial Government and is supposed to bear some relation to the price of sugar. This however is not the case and cannot be the case, as sugar prices may go up and down after the crushing season is over. An example is before us now as the prices for cane were fixed on a sugar price which has fallen by As. 12 per maund since crushing stopped.

45. The price of gur does not influence the price of cane in any way.

47. We pay only the rate fixed under the Sugarcane Act XV of 1934.

48. The fixation of cane prices on any basis is wrong. The only thing that can justify this is the fixation of sugar prices as well. To fix the price of the raw material and not of produced article has resulted in serious losses to the sugar factories, and has resulted in lower prices for cane then was paid at any time prior to the fixing of cane prices. When it is a question of supply and demand it should be left to the grower of cane to get the best price he can, but he should be protected so as to prevent unscrupulous factories from cutting his weighments. It cannot be too strongly emphasised that to fix the price of the raw material, but to leave the price of the manufactured article to the tender mercies of speculators is most unjust.

49. It is not practical to pay a bonus for superior cane as this would entail a large staff for analysis of each consignment (cart of cane). The cost would be prohibitive.

50. Season.	Commenced.	Finished.
1934-35	10th November, 1934	2nd April, 1935.
1935-36	15th November, 1935	5th May, 1936.
1936-37	27th November, 1936	8th May, 1937.

The period is sufficiently long for economical working.

51. Climatic condition in the Summer months will make efficient operation of factories difficult and is unnecessary.

Labour.

	SEASON.		OFF SEASON.	
	Skilled.	Unskilled.	Skilled.	Unskilled.
53.	104	290	53	65

A very small percentage of skilled labour is brought in from other parts of the United Provinces and Bihar. The greater part of our labour is local and has been trained in this factory.

54. No skilled labour is imported from abroad. Some half a dozen skilled hands are employed from other parts of India.

55. See Question No. 54.

56. Sufficient quarters for all labour are provided. A large percentage of the quarters are built so that the employees may have their families with them. Electric light and water are laid on and fuel and kerosene oil are provided free. A qualified doctor is in residence at the factory, and a stock of medicine is carried.

Power.

57. Extra fuel has so far been necessary. Wood is the fuel and the cost for season 1934-35 was Rs. 3,638. For 1935-36 Rs. 9,059-3 and for 1936-37 Rs. 6,679-4-8.

There is no surplus bagasse.

58. Molasses.

59. 8,084 maunds of molasses was produced in 1934-35 and the price per maund was anna 1. 28,674 maunds 20 seers in 1935-36 and the price per maund As. 2.

60. The market is local.

61. It is intended to use all our molasses as manure in future. This is not the best use to which molasses can be put, as it is a waste of raw material for producing power alcohol. Central power alcohol distilleries should be installed and this can only be done profitably if legislation is introduced to make it compulsory for all spirit to contain a given percentage of alcohol say 10 per cent. to 12 per cent., as is done in a large number of other countries. This alcohol could be taxed at the same rate as petrol so that there would be no loss of income to Government. There would be no lack of capital for the erection and operation of distilleries but the licences should only be granted to sugar factories in groups and the output of alcohol regulated sc as not to exceed the demand. This way of using molasses would keep in India a very large sum of money now being paid to foreign concerns and is removed from India for good.

62. We have no surplus bagasse. Where is a surplus it could be used for the manufacture of paper and insulating board.

64. Stock at beginning of the season—

	Mds.	Srs.
1934-35	*Nil.*	
1935-36	*Nil.*	
1936-37	24,082	20
Stock at the close of season—		
1934-35	*Nil.*	
1935-36	47,430	0
1936-37	58,625	0

65. The sugar is stored in a air-tight and damp-proof godown which can hold 50,000 maunds of sugar.

It is contemplated to increase storage capacity, when funds are available, by building "Silos".

66. Ordinarily sugar will depreciate Re. 1 per maund if stored through the monsoon. Dampness, due to extra heavy rains last year, was the cause of damage.

The better the grade of sugar the less the damage from humidity in comparison with sugar containing a greater percentage of molasses. Carbonitation sugar keeps its colour better than sulphitation sugar as a rule.

67. Damaged sugar is either sold as such at a reduced price for sweet-making, or if badly damaged it is remelted. Either method shows a loss.

68. The purer the sugar the better it will keep and any improvement in the quality of sugar will tend to improve its keeping qualities.

69. There is very little damage in actual transit, but sugar can be, and sometimes is, damaged during transhipment from one wagon to another of a different gauge. This can be prevented by ordinary care during wet weather, or by not leaving sugar bags out in the dew at nights without suitable covering.

70. Wagons supplies are generally adequate for sugar transport.

72. Average sugar price in the year—

	Rs.	A.	P.
1934-35	7	13	9
1935-36	8	0	2
1936-37	5	14	4

The railway freights from Campierganj to following stations are:—

	Per md. Rs.	A.	P.
1. Lucknow	0	6	1
2. Cawnpore	0	8	4
3. Jubbulpore	1	1	7
4. Karachi	1	1	6

73. Copies of Balance Sheets for the year 1934-35 and 1935-36 are sent herewith.

74. Our rates for depreciation are approximately the same as allowed by the income-tax department.

Amounts written-of as depreciation are shown in the Balance Sheets herewith.

75. We have no reserve fund.

76. Dividends distributed—

1934-35 6 per cent. ordinary and preference=Rs. 18,000.

1935-36 no dividend.

77. Our working capital is obtained by hypothecating stocks to a bank, and we have to pay the current bank rate of interest.

78. All charges connected with the directors and management for the years previous to 1937 amounted to Rs. 12,000 per annum, this year all payments to Directors have been stopped, as owing to the increase in the excise duty and the low price of sugar there will be a loss.

79. 12½ per cent. in sugar, as it is uncertain as to what extent the industry will suffer owing to overproduction, excise duty, and cane price fixation without due regard to sugar prices.

Efficiency of industry.

81. As this factory is new and the machinery up to date no great alterations have been made. Extension from 150 tons to 250 tons per day was made in 1935. This reduced the overhead charges. For the present the Directors have foregone any remuneration that may be payable to them, as the extra excise duty has resulted in a loss for the last working season.

82. There is very little if any, margin for reduction in any department and the only way in which we can hope to clear ourselves is in having a definite minimum price fixed for both cane and sugar or no minimum price should be fixed for cane. Small factories should have the excise duty reduced as the burden imposed is beyond our capacity to pay.

Lucknow is our main market.

84. We have a selling agent and he sells our sugar to dealers and to retailers when possible.

85. The present Sugar Contract Form is suitable provided factories enforce the clauses properly.

86. Accurate figures are not available to us.

87. There is usually a big difference between wholesale and retail prices. The speculators have their cut then the dealer has his, and lastly the retailer, who is generally concerned only with the amount he can make from the ignorant villager, usually puts on 25 per cent. as his share of the profit. A low wholesale price means more profit to the dealers, etc., and very little reduction to the consumer in rural India. Hence the small amount of factory sugar consumed *per capita* in this country.

88. Quality for quality Indian sugar will keep as well in similar conditions as any other sugar.

90. Good quality sugar from any source is preferred in India by a discerning minority composed mainly of people of education who can afford to pay for good stuff. The seeming cleanliness of imported sugars are their main attraction to the above people.

91. Some of the sugar produced in India is equal to that of Java, but the majority is below the usual Java sugar imported into this country. Most Indian sugar is of poorer colour, smaller grain, and with less gloss (due to rotary dryers) than Java sugar.

92. The sugar-manufacturing season here extends to 5 months.

(*a*) Our stocks at the end of the season are approximately 50 per cent. of the total manufactured.

(*b*) We cannot say what stocks are with dealers.

(*c*) Our stocks are hypothecated with a bank, and we have to pay interest on the money so tied up.

93 & 94. Yes.

95. Yes, Indian sugar should be standardised, but as the grades made are numerous the method suggested by the first Committee set up by the Indian Sugar Mills' Association in co-operation with Mr. R. C. Srivastava, should be adopted.

96. Except for comparison we have not made use of Indian sugar standards as dealers need educating as to what the standards represent.

(*b*) See above.

97. A sufficient number of standard sugar samples should be prepared in glass jars of good quality and the jars sealed. These should be clearly numbered and put up in cases. A reasonable price should be charged for complete cases of samples and largely advertised. All sugar manufacturers should insist on selling on sample numbers only, and this will compell dealers and factories to keep samples. This will simplify all sugar dealing and eventually, the standard grade numbers will be the recognised dealing medium and if a "futures" market is established this will be of great assistance.

98. A "futures" market may be useful to manufacturers as showing the trend of the market, and will help in deciding the sale policy to be adopted by the factory.

100. In towns the better class sweets are being made from sugar, but except for candy making, only inferior factory sugars are purchased by sweet makers.

101. At the moment there does not appear to be any reasonable hope of fruit canning, etc., on a scale large enough to assist the sugar industry, being profitably established. Sweets are being manufactured, both as a factory and cottage industry, on a scale sufficient to meet all existing demands.

103. No definite information is available, but the price at which Java sugar has been sold at various times indicates that some one must be losing money on it as the margin over duty has been negligible.

104. Export of Indian sugar is possible if (*a*) excise duty is not charged, (*b*) if railway and steamer charges are reduced to a considerable degree, (*c*) all terminal charge, etc., to be abolished on export sugar.

105. (1) The sugar excise duty of 1934 for a time resulted in slightly higher prices for sugar and did not impose any very great hardship on large factories, but small factories were adversely affected and profits almost disappeared. The main reason for the large increase in factory sugar is, however, directly attributable to this excise, as all proprietors immediately began to increase capacity so as to cut down overhead charges and partially make up for the duty. The present glut and consequent collapse of prices can be put down to the 1934 excise duty.

The addition to the above duty in 1937 has definitely put small factories, *i.e.*, those under 400 tons in a very bad financial position and if there is no adequate rise in the sugar market it will not be long before such factories will have to close down and the loss, both to capital and to the agriculturist, will be enormous, to say nothing of the workers who will be thrown out of employment.

This is no idle statement and prospects are really bad for small factories under present conditions. It cannot be too strongly emphasised that *some consideration should be shown to small factories by a rebate of excise duty.* The loss to revenue should not be great, as only about 700,000 maunds of sugar would come under this category, and it would definitely save the small factories from bankruptcy.

106. Usually the whole output of molasses is sold for a nominal figure to a dealer who fills it into empty oil drums, and tins and rails it to his own particular market. The idea on the factory side is to get rid of this troublesome by-product in any way. As the supply greatly exceeds the demand the prices obtained are ridiculous.

Claim for protection.

108. The protection granted to the Indian sugar industry has been effective in preventing large scale dumping of foreign sugar into India.

109. A measure of control of sugar prices is imperative to prevent the present cut-throat policy of factories with regard to sugar sales. No agreement will be reached by factories unless it is made a law that a controlling body be established within a specified period.

110. The greatest needs of the industry at present are improved varieties of cane and increased output per acre.

A lot more can be done in this direction than is being done. If the various agricultural departments were made to realise that they were there for other purposes than to just experiment and have nice looking costly farms as show places. They may perhaps be compelled to spend some of the small grants they receive on real work in the villages. It is true that a certain amount of work is done in the fields of villagers by them, but it is so little that the benefits will not be visible for a long period.

A much larger grant for the improvement of cane and its cultivation should be made and a very much larger staff should be employed of a type that would live and work in the villages and not just on fancy farms. All efforts to improve output and quality should be concentrated on the village cultivator and not on the rich land owners who can afford to employ qualified men. The field men employed should be good practical, trained cultivators, able to demonstrate personally and not just orally. If the field yield of cane can be increased the advantage to India will be enormous. Any reduction in the cost of sugar must now come from the agricultural side, as factory efficiencies are now equal to those of other countries, whereas cane yield and quality are far inferior. The cane-growing education of the ryot is a primary essential.

Again there has been a dearth in the production of improved varieties of cane. This branch should be "gingered" up and be brought into line with those of other sugar countries.

111. As there is a definite overproduction of molasses in India there can be no question of any industry having been injured. If the duty on molasses was to be removed entirely no country could economically sell molasses in India, as they could not even realise the freight on the molasses. Before protection was granted to the sugar industry molasses was a definite asset, but with overproduction it has become a liability.

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(2) Letter No. 519/37-38, dated the 11th September, 1937, from the Campierganj Sugar Mills, Limited, District Gorakhpur, United Provinces.

We have the honour in thankfully returning the papers as promised. We request you to kindly consider the points of rebate in excise duty raised in reply No. 105 with all possible attention. Small factories with a capacity of 300 and below have been dragged to a pitiable condition. However, economic and efficient they might be they are bound to run in loss under the present circumstances. There is practically no hope of rise of the sugar market which could promise the better days for the small factories. The only thing that can save such factories from bankruptcy is the rebate of excise duty.

We know that small factories below 300 tons capacity producing one lakh maunds of sugar with 9·75 recovery and with lowest possible minimum expenses and overhead expenditure have sustained heavy losses. There is always a difference between the cost of the smaller factories and the bigger factories. Besides this overproduction is another obstacle in our way.

We have, therefore, to request you to pay your special attention to smaller factories which have no chance of extension or duplication by giving a rebate in the excise duty. The scale of rebate which in our opinion will be enough for the base existence of the smaller factories without affecting materially the revenue should be:—

	Per cwt.	
	Rs.	A.
1. Khandsari	1	0
2. Vacuum pan	2	0
3. Vacuum pan up to 250 tons with no possibility of extension	1	8

The Madho Kanahya Mahesh Gauri Sugar Mills, Ltd., Basti.

Answers to the General Questionnaire.

1. In November, 1932. Original capacity 400 tons per day of 22 hours.

2. Output for five years is as follows:—

	1932-33.			1933-34.			1934-35.			1935-36.		1936-37.	
	Mds.	srs.	chs.	Mds.	srs.	chs.	Mds.	srs.	chs.	Mds	srs.	Mds.	srs.
Grade I .	85,630	0	0	84,327	20	0	60,270	9	9	144,580	0	148,680	0
Grade II .	75,420	0	0	72,655	0	0	48,285	0	0	72,592	20	78,010	0
Grade III .	4	1	4	19	17	0	..			..		..	
Total .	161,054	11	4	157,001	37	0	108,555	9	9	217,172	2	226,690	0

3. Location of our factory is not very satisfactory as regards cane supply is concerned. For the raw materials our position is similar to other factories around.

(*b*) Cart roads require considerable improvements, especially in the rainy days the roads become worst.

(*c*) No difficulty in getting the required labour.

4. *Process of manufacture.*—" Double sulphitation ". In the sulphitation, the plant and process are both simple and less expensive, but the quality and quantity of the sugar produced are lower than the carbonitation process. Carbonitation process is more expensive due to excessive use of fresh lime prepared at the site daily from lime stone, coke being used as fuel.

5. The original crushing capacity of our plant was 400 tons, which has now been increased to 600 tons by subsequent additions in boiler and boiling house. The extension and the total amount spent is as follows:—

Name of Machinery.—Quadruple, one pan, two crystallisers, one dryer, one boiler, five centrifugal machines, with Magma pump and Duplex pump, settling tanks five, eliminators two, sulphuring tanks three, one sulphur above, one juice heater, one air compressor and one injection water pump, one condenser for triple, knife engine, one lathe, one cupola and other minor equipments.

Charges made in lay-out—Rs. 10,62,361-4-1.

Total amount spent in additions—Rs. 2,69,022-1-7.

6. We are contemplating to make the following additions and alterations, if the funds permit:—

(*a*) to increase the number of mill rollers from 14 to 17.

(*b*) Re-arrangement and extension of centrifugal section for making all first grade sugar.

7. The size of the economic plant is determined by—

(*a*) easy availability of raw material in the vicinity and the duration of season.

(*b*) Ruling prices of cane without competition.

(*c*) Nearness of sugar markets.

(*d*) Disposal of by-products.

(*e*) Capital available.

(*f*) Working expenses.

In our opinion 600 tons capacity plant is the minimum economic plant.

8. Simple parts such as cast iron tanks, pipes and fittings are obtainable in India. All the important parts and principal machinery are to be imported from abroad.

9. We have nothing to say against these departments.

Raw Materials.

10. No. Suitable land is not available in our vicinity.

11, 12 & 13. *Nil.*

14. (*a*) There has been very little variation in the quantity of gate cane with the exception of 1934-35 season, when the crop had been badly damaged by heavy rains and floods.

(*b*) It has not appreciably improved.

15. Cane crop is occassionably damaged and lost by disease and insect pest around this area, which is generally brought during the first fortnight or so of the season. The figure for percentage of the quantity lost is not exactly available.

16. Full cane supply at gate is not available after the 15th February generally. We have to import nearly ⅓rd of our total requirements from out-stations lying up to a distance of 100 miles.

Mostly Co. 213 variety is available.

17. During the cane shortage period, the keen competition begins, but fortunately this has not been experienced during the last two seasons.

18. No great variation except in the season 1934-35.

(i) Excessive rainfall and floods have proved very harmful often.

19. The production of sugarcane in 1936-37 is estimated to be highest taking United Provinces as a whole, but in our area there is no substantial increase. We felt cane shortage from the first week of February, 1937, right in the best period of the season. In our area there is still much scope for further extension of cane cultivation.

20. The data is not available with us.

21. Cane-growers are not getting satisfactory guidance and assistance from the Agricultural Department in the proper selection of seeds and varieties of cane. Also they find great difficulties for bringing their cane to the factory due to bad roads. Also there is no proper arrangement for crossing the streams.

In this connection we give below our suggestions:—

(*a*) Agricultural Department should render help as the time of sowing for the selection of proper varieties according to the local conditions. The Department should have a demonstration farm at different suitable places for training the cane-growers on the modern lines.

(*b*) Proper roads should be provided for the transport of cane to the factory.

(*c*) Proper facilities should be given for crossing the streams.

22. Compulsory acquisition of land for cane cultivation is not advisable according to the Indian condition and this should be left to voluntary negotiations between the zamindars and the millowners.

Zoning system will prove very beneficial for the sugar industry as a whole, if the allotment of area is properly made out according to the requirements of each factory for the gate supply.

The working should be controlled by the committee consisting of all the factory owners in the zone, two ryots representatives and Government official. This committee should meet every year and define zones either by allotting separate blocks of fields to individual factories or by defining centres of purchase of cane at which there should be no competition between factory and factory. Such a committee would act without undue rigidity and would be alive to any change in economic and crop conditions which required alterations in zones.

23. The development of feeder roads is the legitimate function of the local boards. Regarding advances of cash or supply of seed and manure, already several factories are doing this. Further improvement can be made, if proper facilities are provided for the recovery of the advances through Government.

24. (*a*) At present fixation of quota is not desirable nor practicable, unless the correct data of cane supply is available.

(*b*) (i) The licensing of new factories is very essential.

(ii) Extension of existing factories should be subject to licence, and this should not be entrusted to Provinces, but to an All-India body.

25. Proportion of gate cane and rail cane is as under for the last five seasons:—

	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Rail cane .	37	13	15	26	27
Gate cane .	63	87	85	74	73

26 Our gate cane is transported by carts. The average weight of cane per cart varies from month to month, but a fair average for the season

may be taken as 16 maunds per cart. The country carts require improvements, but improvements of roads require first attention. We have not employed any improved type of cart.

In our opinion rubber-tyred carts will prove useful only, when all the feeder roads are well repaired for traffic purposes.

27. In our vicinity the mileage of roads is not adequate. The main Public Works Department road is in good condition, but the feeder roads are exceedingly bad, especially when rains set in during the cane season, the feeder roads become quite unserviceable ultimately resulting shortage of cane.

28. Cane is carted up to a distance of about 20 miles and it takes 12 to 48 hours in reaching our factory gate. As regards protection of cane, during road transport, so far nothing seems to be done in this direction.

29. The cane-growers usually employ their own carts, but when they hire carts for their corn transport, they pay about 1 pie per maund per mile within a radius of ten miles.

30. Cane-growers have to pay ferry tolls while crossing the streams in their way.

31. We are contemplating to introduce pass system in the villages surrounding our factory. The carts are released generally within 24 hours.

32. We get our rail cane from out-station, lying between 10 to 100 miles. It takes about 36 to 72 hours in getting cane at our factory.

The railway arrangements for transport are not quite satisfactory. The transportation arrangements should be as quick as possible to avoid detention in transit, especially at junction station.

33. The freight is charged on the mileage basis fixing minimum charges for each type of wagon. The rates have been uniform throughout in the recent years, but only at the later stage of the last season some reductions were made in the existing rates for prolonging the season so that the surplus cane may be consumed by the factories.

We will prefer a flat rate provided it is fixed on a reasonable figure. In our opinion the flat rate should be fixed on certain distance ratio.

34. Railway freight rates require further reduction for the raw materials used in the factory.

35. We have no tramway system.

36. We have no experience.

37. Usually rail cane is found more deteriorated than the cart cane. In our opinion loss in each case is as under:—

(*a*) Rail cane 0·3 to 0·5 per cent. in recovery of sugar.

(*b*) Gate cane 0·1 to 0·3 per cent. in recovery of sugar.

38. Proportions of cane purchased direct and through contractors during the last season is under:—

Direct 84 per cent.

Through contractors 16 per cent.

39. We have made no direct arrangement with the cultivators, but we contribute yearly Rs. 3,000 to the Government Cane Development Society which distribute manure, improved varieties of cane seeds to cane-growers.

40. At our gate cane is purchased directly from the growers and also through the Cane Development Society, but at the outstations it is partly purchased direct and partly through the contractors, who are paid commission from Rs. 2-8 to Rs. 3-8 per hundred maunds of cane.

41. About one lakh maunds of cane was purchased by us from the Cane Development Society during the last cane season.

42. Cane at the gate and at the outstations are weighed on the suitable cart weighbridges. Payments are made promptly after the cane is weighed, within 24 hours or when the cane purchases are presented for payment.

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43. We are giving below the prices at which we purchased cane during the last five years:—

1932-33—

Gate As. 5, As. 5-6 and As. 6.

Rail As. 5, As. 5-3, As. 5-9, As. 5-10½, As. 6, As. 6-6 and As. 7.

1933-34—

Gate As. 5, As. 5-6, As. 6 and As. 6-6.

Rail As. 5, As. 5-3, As. 5-6, As. 6, As. 6-3, As. 6-6, As. 6-9, As. 7, As. 7-6, As. 8, As. 8-3 and As. 8-6.

1934-35—

Gate As. 5, As. 5-6 and As. 6.

Rail As. 5, As. 5-6, As. 6 and As. 6-6.

1935-36—

Gate As. 5, As. 5-3, As. 5-6, As. 6 and As. 6-6.

Rail As. 5, As. 5-3, As. 5-6, As. 5-9 and As. 6.

1936-37—

Gate As. 3-3, As. 3-6, As. 3-9, As. 4, As. 4-3 and As. 4-6.

Rail As. 4-9.

When the prices were not controlled by the Government these usually went up as the season advanced, particularly after the month of January.

44. The cane prices are fixed by the Government on the basis of price of sugar.

45. When the market for gur jaggery or khandsari sugar is favourable, the cane-growers begin to manufacture gur and do not like to bring their cane to the factory, unless attractive prices are offered.

46. Yes, the prices of gur varied in the recent years. Owing to the fall in sugar prices in the last season the cane-growers did not take to gur manufacture on the previous scales.

47. Usually we paid prices of sugarcane according to the prices fixed by the Government under the Sugarcane Act XV of 1934. It was only on a few occasions that we paid higher prices during cane shortage periods.

48. The basis on which the cane prices are fixed at present is not satisfactory. There are no sound basis for the formula. It does not take into account the quality of cane, which varies as the season advances. This is very harmful both for the cane-growers and factory owners. The price of cane should have no bearing with the price of sugar and it should be disconnected altogether. This should be fixed on the basis of sugar contents. It is necessary that the prices should be uniform for both the United Provinces and Bihar.

49. The introduction of bonus system will be helpful to industry and cane-growers, if early and late ripening varieties are available in sufficient large quantity for extending the crushing season.

50. The duration of the crushing season for the last five years are given below:—

Season.	Days.
(1) 1932-33	168
(2) 1933-34	162
(3) 1934-35	103
(4) 1935-36	153
(5) 1936-37	155½

The above periods are satisfactory with the exception of 1934-35 season, provided the full supply is available throughout.

51. The introduction of early and late varieties of cane will certainly extend the crushing season, if available in a fairly large quantity.

52. The Agricultural and Co-operative Departments have not so far rendered any appreciable help to the cane-growers and sugar industry.

Labour.

53. We employ local skilled labour in our factory, both during crushing and silent seasons. The number of unskilled labour is very limited.

54. We employ local skilled labour.

55. Only in the erection time and part of first working season we had employed one British erector.

56. As far as possible suitable quarters have been provided in the factory premises.

Power.

57. Our total requirements of fuel are not covered by the bagasse available in our factory. We have to turn firewood and steam coal and the amounts spent are given below for the last five seasons:—

	Rs.	A.	P.
1932-33	24,622	4	9
1933-34	19,906	4	6
1934-35	18,877	0	6
1935-36	11,762	0	6
1936-37	17,519	10	3

We do not have surplus bagasses.

By-products.

58. The following by-products are produced in our factory:—

(1) Molasses, (2) Bagasse and (3) Press mud.

59. The outturn and price of molasses for the last four years are given below.

Season.	Produced.	Molases sold and spoiled.		Amount.		
	Mds.	Md.	srs.	Rs.	A.	P.
1932-33 . . .	81,413	13,662	0	801	15	0
1933-34 . . .	69,272	121,542 (31,621	0 30 spoiled)	1,257	4	9
1934-35 . . .	42,238	23,289	5	689	1	6
1935-36 . . .	80,611	166,804 (17,853	35 33 spoiled)	6,488	5	9

The prices of molasses have gone down very much. At present it is of no value, but on the other hand it is a burden on the factory and causes nuisance.

60. At present there is no proper market for our molasses. We are making petty sales to Tobacco Dealers. Last year it was purchased by the Indian Molasses Co., Ltd., of Calcutta.

61. We do not find any use of molasses at present, unless something is done by the Government. We do not see any proper use of this. We suggest the manufacture of power alcohol.

62. We never have any surplus bagasse. Bagasse may be utilised for the manufacture of card-board for different uses.

63. Press mud may be tried for manuring purposes.

64. *Storage and transportation of sugar*—

—	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Md. sr.	Md. sr. ch.	Md. sr. ch.	Md. sr. ch.	Md. sr. ch.
At the beginning of the season.	*Nil.*	4,237 39 8	133 9 6	1,550 27 0	5,544 26 12
At the end of season.	53,917 20	21,285 39 3	50,093 13 13	123,629 25 0	113,819 13 8

65. We store sugar in our factory brick built godowns, the maximum capacity of which is about 50,000 bags of 2½ maunds each. The storage capacity was doubled in the year 1935. Even the present storage capacity is about half of our total production of the season.

66. Our godowns are fairly good for storage purposes, but sometime second sugar is affected to some extent by atmospheric conditions during the rainy season. The slightly damaged bags are easily disposed off in the market.

67. Our sugar has never been so seriously damaged as to necessitate the reconditioning, it is sold outright.

68. In our case only a little bigger grain is requried and all white sugar.

69. Railway wagons require further improvement for sugar traffic.

70. We have often experienced difficulty in obtaining empty wagons for sugar despatch. It is very essential that the railway company should increase their rolling stock to meet the increased requirements of the factories.

71. The railway wagons require improvements so that these may become airtight and water proof. The wagons meant for sugar traffic should not be utilized for carrying coal, coke, hides and liquid especially of offensive smell, *i.e.*, kerosene oil, crude oil, etc.

1932-33.

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Ports.	Rly. freight.	Up-country.	Rly. freight.	Price.
	Rs. A. P.		Rs. A. P.	
Kantapukur	1 1 2	Jullundur City	1 15 2	Price ranged between Rs. 8-12 to Rs. 9-9 for No. 1 sugar and Rs. 7-8 to Rs. 8-6 per maund for No. 2 sugar.
Howrah	1 1 2	Gwalior	0 13 1	
Karachi	1 14 2	Delhi	0 5 5	
Wadi Bandar	1 7 4	Lucknow	0 5 1	
		Amritsar	1 8 3	
		Jhansi	0 12 3	
		Multan City	1 14 2	
		Elgin Club	0 13 1	
		Cawnpore	0 6 9	
		Indore	1 6 6	
		Farrukhabad	0 10 2	
		Ujjain	1 5 7	
		Sultanpur	0 8 2	
		Hazarat Nizam Uddin.	1 0 10	
		Phaphund	0 9 2	

Ports.	Rly. freight.	Up-country.	Rly. freight.	Price.
		1933-34.		
	Rs. A. P.		Rs. A. P.	
Kantapukur	1 1 2	Amritsar	1 8 3	Price ranged between Rs. 7-14 to Rs. 8-14 to Rs. 9 for No. 1 sugar and Rs. 6-12 to Rs. 8-6 for No. 2 sugar.
Wadi Bandar	1 7 4	Havelian	2 1 7	
		Ganjdandwara	0 11 4	
		Elgin Club	0 13 3	
		Lucknow	0 5 11	
		Indore	1 6 6	
		Khandwa	1 7 0	
		Delhi Shahadra	1 0 0	
		Jullundur City	1 6 7	
		Ambala City	1 3 1	
		Sanwad	1 7 11	
		Jaipur	1 2 2	
		Ujjain	1 5 7	
		Jhansi	0 12 5	
		Cawnpur C. ganj	0 6 9	
		1934-35.		
Kantapukur	0 15 5	Delhi	0 13 7	Price ranged between Rs. 7-14 to Rs. 8-15 for No. 1 sugar and Rs. 7-12 to Rs. 8-10 per maund for No. 2 sugar.
Karachi City	1 0 6	Rawalpindi	1 12 8	
		Lucknow	0 5 11	
		Gujarkhan	1 11 1	
		Jhansi	0 12 5	
		Farrukhabad	0 10 5	
		Gonda	0 3 3	
		Delhi Shahadra	0 13 9	
		Peshawar	1 13 11	
		Amritsar	1 7 10	
		Indore	1 7 5	
		Ajmer	1 5 4	
		Jullundur City	1 8 4	
		Sanawad	1 7 11	
		Lahore	1 6 0	
		Khanewal	1 11 2	
		1935-36.		
Karachi	1 0 6	Amritsar	1 4 10	Price ranged between Rs. 7 to Rs. 8-6 for No. 1 sugar and Rs. 6-7 to Rs. 8 for No. 2 sugar.
Kantapukur	0 12 6	Mundipurewala	1 9 10	
		Rawalpindi	1 12 3	
		Taran Taran	1 5 4	
		Mardan	1 15 7	
		Jhansi	0 12 5	
		Lahore	1 6 2	
		Salamatpur	1 1 11	
		Delhi	0 13 7	
		Jhansi	0 9 2	
		Ahmedabad	1 0 6	
		Ujjain	1 5 7	

1936-37.

Ports.	Rly freight.			Up-country.	Rly. freight.			Price.
	Rs.	A.	P.		Rs.	A.	P.	
Kantapukur	0	12	6	Jhansi	0	9	2	Price ranged between Rs. 5-14 to Rs. 6-12 for No. 1 sugar and Rs. 5-8 to Rs. 6-4 per maund for No. 2 sugar.
Karachi City	1	0	6	Ahmedabad	1	0	6	
Wadi Bandar	1	0	3	Dhandhuka	1	4	2	
Howrah	0	12	6	Rawalpindi	1	12	3	
				Havelian	1	14	2	
				Mardan	1	15	7	
				Cawnpore	0	6	9	
				Layallpur	1	9	3	
				Miyagam	1	4	0	
				Umreth	1	3	4	
				Nadiad	1	2	10	
				Dabhoi	1	4	10	
				Borsad	1	3	7	
				Mehsana	1	2	11	
				Kaloi	1	1	10	
				Kodi	1	4	10	

Capital account and overhead charges.

73. We are giving below the following particulars as at 30th September, 1936:—

	Rs.	A.	P.
(i) Lease hold land	6,840	10	0
(ii) Land	...		
(iii) Building	2,02,388	13	3
(iv) Plants and machinery	11,33,707	13	8
(v) Other assets	27,241	8	0

74. The total amount written off for depreciation for the last four years is given below:—

Depreciations.

	Rs.	A.	P.
(i) Building	34,294	12	7
(ii) Plant and machinery	2,50,298	9	1
(iii) Other assets	7,942	5	7
	2,92,535	11	3

The rates for depreciations are the same as allowed by the Income-tax Department.

75. Amount of Reserve Fund Rs. 1,80,000.

The amount of Reserve Fund during the last five years is as above.

76. The dividends paid during the last four years are given below:—

	Rs.	A.	P.
1932-33	1,19,990	0	0
1933-34	1,71,057	4	3
1934-35	76,160	0	0
1935-36	1,23,760	0	0
	4,90,967	4	3

77. Mostly we borrow from the Bank on lien of our sugar stock at which interest at Rs. 3½ per cent. per annum is paid.

78. Head office, annual expenses about Rs. 6,000.

Managing Agent's commission 5 per cent. on the net profit of the Company.

In our case there are no Managing Agents, but Managing Directors.

79. In our opinion 10 per cent. on the original block account (without allowance for subsequent writings off for Depreciation) would be a fair figure. This amount will barely cover provision for labour welfare, risks, breakdown of machinery, etc.

Efficiency of production.

80. The necessary forms are sent herewith after being duly filled in.*

81. We have made the following improvements in our factory since 1934 to reduce the working cost:—

(*a*) We have increased the crushing capacity of our plant from 400 tons to 600 tons.

(*b*) Our overhead charges are already low and no further reduction is required.

(*c*) In the silent season, we make heavy reduction in staff and labour.

82. Further reduction in staff and labour is not possible but improvement in recovery is possible if improved varieties of cane are available in large quantity.

Marketing.

83. We deal chiefly with the following marketing centres:—

Cawnpore, Lucknow, Bareilly, Farrukhabad, Jhansi, Delhi, Ambala. Lahore, Amritsar, Jullundur City, Lyallpur, Rawalpindi, Gwalior, Indore, Ahmedabad, Karachi, Bombay, Calcutta and Basti.

84. The sales are made to the dealers on the basis of samples which are shown at the time of making bargain, and the supplies are made accordingly. The relative documents are generally sent through the Bank for collection if not paid for in full in advance.

The dealers make sales to the retailers usually on credit.

85. The sugar contract form prepared and passed by our Calcutta Association is quite suitable.

86. Wholesale and retail prices are given below for the last five years:—

	Wholesale.		Retail.	
Year.	No. 1.	No. 2.	No. 1.	No. 2.
	Rs. A.	Rs. A.	Rs. A.	Rs. A.
1932-33 . .	8 10 to 9 9	7 5 to 8 8	8 14 to 9 4	7 10 to 8 12
1933-34 . .	7 14 to 9 0	6 12 to 8 11	8 0 to 9 8	7 3 to 8 12
1934-35 . .	7 14 to 8 15	7 10 to 8 10	8 4 to 9 2	8 0 to 8 14
1935-36 . .	7 0 to 8 6	6 7 to 8 0	7 12 to 8 10	6 10 to 8 2
1936-37 . .	5 14 to 6 12	5 8 to 6 4	6 0 to 7 0	5 11 to 6 6

87. In the previous years there was a difference of amount As. 2 to As. 4 per maund, but it is disappearing gradually.

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* Not printed.

88. They store sugar in their shops or godowns.

89 & 91. The best quality Indian sugar is as good as the best imported foreign sugar in keeping and other qualities.

90. Only a little quantity of Java sugar is preferred in hotels and restaurants run in the European style for their customers. But it is being replaced by high grade Indian sugars.

92. In the previous years the sugar stock was totally cleared before the commencement of the next season, but since last year it is being carried throughout the next crushing season and thereafter.

Heavy stock of the dealers generally remain with the manufacturers, till they are able to dispose off in the market.

The manufacturers borrow money from the Bank by keeping the sugar stock under lien to the Bank. The Bank makes advances up to 75 per cent. of the market value of stock.

In case of forward deliveries, dealers deposit some earnest money with the manufacturers which is generally accounted for the last delivery.

93. The marketing survey would be of advantage, as it is an essential preliminary to the operations of the Central Marketing Organisation.

94. A Central Sales Organisation will prove very useful, if it is run properly and efficiently.

95. We are in favour of the standardisation of Indian sugar. This should be based on colour, grain and sucrose contents.

96. (a) So far as we have done no business on the basis of the sugar standards prescribed by the Director, Imperial Institute of Sugar Technology.

(b) So far we have not been able to make use of these standards for grading purposes.

97. A very nominal price should be charged for the samples or these may be exchanged for high grade sugar produced in the factory.

98. It is too early to proceed so far.

99. We have no such data with us.

The present low prices will tend towards increased consumption.

100. It is very difficult to say to what extent factory sugar is replacing gur, but mostly sweetmeats are prepared from sugar.

101. The Government should give necessary help for the manufacture of sweets, syrups, fruit preservation and canning, etc. First move in this direction should be to remove excise duty on the quantity of sugar consumed in these subsidiary industries.

102. We have no such data with us.

105. Excise duty imposed in 1934 caused a great fall in profits to the millowners, who had invested heavy amounts very recently. This fall also hindered further progress of the industry and its by-products and also the welfare of the labour. The industry had not recovered from this blow when it was badly hit again in the year 1937 by an additional excise duty. We are of the opinion that sooner or later some sugar factories will have to close down. The cane-growers have also been badly affected, as the cane prices have gone down very much. Besides this the future monetary progress of the staff and labour has been checked.

106. At present we do not see any market for molasses.

107. So far as we understand, only the Indian Molasses Company, Calcutta, export molasses to foreign countries.

Claim for Protection.

108. Protection granted to the sugar industry has evidently made India self-supporting within a very short time. It has played a considerable part in removing unemployment among educated and uneducated. It has been a boon to the cane cultivators, as this is the only cash crop, which

fulfils their requirements and helps the easy collection of the Government revenue.

Area under cane cultivation has also considerably increased giving employment to masses. It is only due to protection that in many cases even the most conservative capitalists had loosened the strings of their purses and gladly invested heavy amounts in the hope of getting good returns, although they were quite new to this line.

The sugar prices have fallen so much that these are within the reach of masses.

109. The present rates of duties should be continued if not enhanced for the remaining period of protection. If the sugar industry is to be stabilized it is essential that the existing excise duty should be reduced by 50 per cent.

110. For the development of the industry move should be taken towards the following points:—

(*a*) Utilization of molasses for manufacturing power alcohol.

(*b*) Introduction of early and late ripening varieties of cane in the neighbourhood of factories for extending crushing season.

(*c*) To adopt measures for increasing consumption of sugar.

(*d*) Introduction of special reduced freight rate for inward and outward traffic for all description of goods.

(*e*) Proper facilities should be provided for exports of Indian sugar to the United Kingdom.

(*f*) Customs duty should be abolished on sugar machinery and its component parts.

(*g*) Agricultural facilities to the cane-growers by sinking tubewells, etc.

111. The increased production of molasses in India and its cheapness has stopped the import of molasses, and not the duty. No Indian industry has suffered as molasses are available at nominal prices in India itself.

Basti Sugar Mills Co., Ltd., Basti Factory, Basti.

Reply to the Questionnaire framed by Tariff Board.

1. Our factory started manufacture of sugar in the year 1928-29. Its capacity was 400 tons a day but it has since been increased to about 800 tons a day.

2. Output for the last seven years has been as follows:—

	First Sugar.	Second Sugar.	Third Sugar.
	Mds.	Mds.	Mds.
1930-31 . .	...	...	...
1931-32 . .	93,187·5	81,517·5	20,255
1932-33 . .	...	...	...
1933-34 . .	119,095	114,965·0	16,170
1934-35 . .	105,587·5	58,612·5	...
1935-36 . .	215,720·0	67,671	...
1936-37 . .	251,130·0	41,452·5	...

3. Yes, our factory is advantageously situated so far as cane supplied are concerned but things like limestone, coal and coke have got to be brought from very long distances.

4. The process of our manufacture is double carbonitation. Sugar manufactured with double carbonitation process is better in quality and the grade is also better. The juice is clarified and made fit for filtration in the surest and most reliable way. Disadvantages of double carbonitation are that plant is more costly and cost of manufacture of sugar is also much

higher than in a sulphitation factory. The working is also more elaborate and complicate and required more experience and trained and therefore expensive labour.

5. No change has been made in lay-out of our factory. The following extensions have been made in our factory:—

(1) One boiler, (2) one calandria vacuum pan, (3) crystallizer, (4) seven centrifugals, (5) one evaporator, (6) one pressure pump, (7) one steam engine, (8) two carbonitation tanks, (9) two sulphitation tanks for sulphuring juices, (10) one lime kiln, (11) one additional water injection pump, (12) one additional vacuum pump, (13) one dryer, (14) Spray collers and a pump.

We are not contemplating any extension or replacement on account of there being practically no profits left.

7. (*a*) The main factors which determine the size of an economic plat in the sugar industry in my opinion are the following:—

(1) Raw material, (2) supply of labour, (3) cost of labour, (4) cost of management, (5) market for sugar and molasses, (6) its situation so far as raw materials and other requirements are concerned and (7) transportation charges.

(*b*) The smallest unit of production which can be operated economically in my opinion is eight hundred tons daily crushing plant under the present day condition.

8. India is not in a position to supply a fairly large amount of factory equipments though it is poor in quality when compared with foreign made things.

9. (*a*) I have nothing to say about the Imperial Institute of Sugar Technology but I cannot help saying that in my opinion it has not proved of much use. If I am not mistaken it has been collecting figures and statistics and no real help has been given to the factories towards the improvements of its working.

(*b*) We have never dealt with the Industry Department. The most important suggestion that I can offer is that experts should visit all the factories free of any cost and give all possible help they could to improve the efficiency of the plant.

Raw Materials.

10. Yes. We do undertake cultivation of sugarcane. We have not purchased any land but have taken land on lease. There has been no difficulty in getting the land on lease but I may point out that there is no land available for lease near the factory. We would like to extend our cultivation but we cannot get land at suitable places and at suitable rates.

11. (*a*) We have got about 850 acres of land situated at five places at a distance of fifteen to twenty miles from the factory. The biggest farm in one plot is of 370·8 acres. The area held by us in different years has been as follows:—

	Acres.
1934	105
1935	550
1936	712
1937	830

(*b*) Average area under cane each year—

1935	197·6
1936	281·88
1937	440·00

(*c*) During the years 1934 and 1935 only Coimbatore No. 213 was grown at our farm. It was only in the year 1936 that the following varieties were introduced on a small scale while Co. 213 occupied almost the whole area under cane:—

Co. 356, Co. 393, Co. 312, Co. 331, Co. 373, Co. 385, Co. 290, Co. 313, Co. 285 and Co 213.

(*d*) There was no particular system of rotation adopted for the first two years and the soil was practically virgin and had to be cleared of jungles and made fit for cultivation. Whatever land became available for cultivation it was brought under cane. The sowing was flat followed by earthing up during rains up to year 1936, while trenching has been started on lighter soils from the year 1937.

During the last two years we followed the following arrangement:—

(1) Cane, (2) ratoon, (3) fallow under green manure, (4) cane.

From this year we intend changing the above method owing to very low price of cane and to enable the farms to pay their way.

Instead of having cane after green manure fallow, we intend to divide the land into two portions and take wheat in one half and cane in the other half.

For the first two years we have been using cow dung manure as a basal dressing but now we have taken to green manuring as the latter is less expensive.

We are also using fertilisers since the year 1936. Such as the Government departmental mixture of cake and amonium sulphate supplying about fifty to sixty pounds of nitrogen per acre.

(*e*) The area under different varieties other than Co. 213 has been very small and therefore our results are not conclusive.

Average yield per acre for Co. 213 was as follows:—

1935-36—132 maunds.

1936-37—New plantation 468 maunds.
Ratoon 172 maunds.

Combines for new plantation and ratoon 333 maunds.

The yield for one acre under Co. 356 during the year 1936-37 was 693 maunds.

12. (*a*) We have set aside about 8 acres of land for experiments in cane cultivation and manuring at different farms from this year.

(*b*) So far we have not set aside any area for production of seed for sale or free distribution to cultivators. Whenever an occasion arises for the sale of seed we select the best portion of our crop and earmark it for seed purposes. This year we sold about 600 maunds of cane to the Cane Development Organization who distributed the seed to.

13. We have tried all varieties of cane, for instance we tried Coimbatore No., early and late varieties of cane.

We have not taken any help from the Agricultural Department excepting that we have got some seed from them and have got some tubewell borings done.

14. The cane cultivation has increased during the last seven years. In the year 1930-31 our gate supplies were as follows and in the year 1936-37 are as follows:—

	Mds.	Srs.
1930-31	1,151,511	0
1931-32	1,224,695	0
1932-33	1,682,574	30
1933-34	2,015,789	19
1934-35	1,291,925	30
1935-36	2,456,039	0
1936-37	2,385,061	10

(*b*) The quality of the cane has improved inasmuch as that Coimbatore 213 has replaced the old desi cane to a very large extent otherwise there is no mŏve in the direction of improvement of cane.

15. The cane is not liable to damage from frost in areas round about our factory and we cannot give any definite idea about the damage from disease or insect pest because we have had no experience of it since we started the factory.

16. Our factory is assured of sugarcane supplies of suitable cane but we wish that we get entire supplies of cane at the gate. In these days of hard competition and heavy excise duty we can ill-afford to import cane by rail but we may begin feeling difficulty about cane supplies if the rate of sugar does not improve and the factories are not able to pay remunerative prices to the cane-growers. The principal variety of cane crushed in our factory is Co. 213 though Baraukha and Sarauti canes do come in. The field yield of Coimbatore cane No. 213 is about three hundred maunds per acre and yield of Sarauti and Baraukha will not be more than one hundred and fifty maunds per acre.

Sugar contents are as follows:—

Co. 213	13 per cent.	average for the season.	
Baraukha	8	ditto	ditto.
Sarauti	9	ditto	ditto.

17. The prices and supplies of cane are likely to be affected by the competition of other factories when there is shortage of cane. About two or three years ago it so happened that the prices of cane went up to an unremunerative figures and in spite of that factories did not get sugarcane for their requirements.

18. (*a*) The area under cultivation from which we ordinarily obtain our supplies has not been subject to considerable variations but in some years in spite of there being no considerable variations in areas we did not get supply of cane because of insufficient rains or excessive rains. There is likely to be a great variation in the area under cultivation in the near future on account of depressed sugar market and consequently low rates of cane. (iii) Gur prices are bound to affect the prices of cane. (iv) Cash crops are also bound to affect cane crop.

19. There was an excess of sugarcane in Gorakhpore District but in Basti District where our factory is situated had comparatively poor crop and therefore no restriction is called for.

20. We have no definite information so far as the cost of cultivation of sugarcane is concerned but we hear that the average cost of cultivation of cane per acre is between Rs. 50 to Rs. 60.

I am sorry I do not know the details.

21. The main difficulties of cane-growers in our area are as follows:—

(1) No arrangement for irrigation and no suitable ploughs.

(2) No good seed and manure. There is great difficulty in delivery of cane at the factory gate is on account of bad roads in our District. If tram lines could be laid I feel that transportation will be easy and cheaper and larger quantity of cane could be attracted to the factory gates.

22. (*a*) I agree with the conclusion arrived at by the previous Tariff Board.

(*b*) I am in favour of allotting special areas to the different factories and I am also in favour of zone system but zones may not be possible in places when sugar factories are situated very close to each other or where the supplies to the factories come from very long distance of over thirty miles. The zones can only be worked if the factories themselves are keen on it and they work the zones in an honest and straight forward manner.

23. If zone system was introduced our factory will gladly give all possible assistance to the cultivators in the form of supply of seed and manure and advance but though some Government organizations by which advances made by us are secured, we may not be able to advance anything towards the feeder roads on account of no profits left in the industry.

24. (a) We are in favour of fixing a quota.

(b) I am in favour of licencing new factories.

(c) I am also in favour of licencing of extensions of existing factories, the reason being that the factories have sprung up like mushrooms not caring for either the supply of raw material or marketing of their output. Factories have been situated very close to each other and in some places there are two factories at one station resulting in unnecessary competition so far as the raw material is concerned. Besides there is an overproduction of sugar and if the factory productions are not limited or those factories are not licenced there is no guarantee that sugar more than what is needed is manufactured in India. If owing to some special circumstance factories have a prosperous year it is possible that some capitalists may be tempted to put in their money in sugar and new factories may come up.

25. Our gate supply is eight per cent. and balance is rail cane. There are not very wide variations in gate supply for the last few years. Our entire supply of cane is by bullock carts. No lorries are used. The average weight of cane per bullock cart is between seventeen to eighteen maunds. It is very necessary to replace country carts by rubber-tyred carts but I do not think it is possible unless the Government or some other outside agency comes to the help of the cart owners. We are using about ten improved type of carts with rubber-tyres and our experience is that they are very economical inasmuch as they carry at least twice the weight than the ordinary bullock cart.

27. Yes, the mileage or roads in our vicinity is adequate but the condition of main and feeder roads is simply hopeless.

28. The cane is brought to our factory from a distance of over thirty miles also. The average time taken between cutting cane and delivery at the factory is about three days. There is no protection against deterioration during transit.

29. There is no rate fixed for cartage of cane by cart per maund and per mile but average rate paid is over one anna per maund. The cane coming from five to six miles has to pay one anna per maund while cartage on cane coming from long distances is paid anything up to two annas per maund. More than the half the cane-growers own their bullock cart and the rest have to hire them.

30. No.

31. The only arrangement that we have so far been able to make is to take cane from Co-operative Society. We tried to arrive at some arrangement and the official help of the Collector was also sought in the matter and in spite of his and our best efforts no arrangement could be arrived at. The cane-grower does not want to bind himself to anything. The cane-grower's efforts are to finish this crop as early as possible with the result that there is a great rush in early part of the season. The normal detention of cart at our factory is about thirty-six hours in December and about twenty-four hours in January and practically no detention in the months of February and March. One thing that we could do was that we did not stop our factory either for daily cleaning or for periodical cleaning. All kinds of facilities like parking, etc., are provided to the cane-growers.

32. The cane is brought by rail sometimes from a distance of seventy to hundred miles but as a rule we try to take cane not beyond thirty-two miles. The average time taken between the cutting of cane and delivery at the factory is about two days. Rail arrangements are quite satisfactory and no unnecessary delay is caused on that account but there is no serious

complaint against Bengal and North-Western Railway, *viz.*, that sugarcane wagons are not available when the factories need them the most.

33. The freights are calculated according to the capacity of the wagons. There has been no change in rates excepting that the special reduction was shown this year on account of the fear of a large quantity of cane being left over uncrushed. We would prefer maundage rate for a flat rate if possible. Rate on limestone is of course a concessional rate as compared with other commodities but, in spite of this, railway freight on limestone per maund comes to annas six and pies seven. Ours being a carbonitation plant we use about 400 maunds of limestone daily. We have been negotiating with the railway to give us a further concession but we have not succeeded. Freight of raw material and manure also needs a reduction.

35. There is no tramway in our district.

36. Tramway will be an asset to our district and will prove of great advantage to the factory and the cane-growers alike. In our opinion there should be no difficulty in laying out tramway system.

37. There is a fall of up to four degrees in purities of juices owing to delay in delivery by road and rail.

38. Eight per cent. of cane is purchased from cane-growers at our gate and the balance comes through the contractors by rail.

39. Nothing. Sometimes we give seed.

40. Cane purchased through agents is liable to commission of Rs. 2-8 per hundred maunds. This Rs. 2-8 includes dryage and other miscellaneous expenses.

41. The cane was purchased last year through the Development Organisation. One pice per maund was paid by way of commission and Rs. 3,000 to the Organization for development of cane under the New Government Scheme of cane development.

42. Cane cart is weighed at the factory cart weighbridge and the rail cane is weighed at the factory on the rail weighbridge set up for the purpose. Payment is made soon after cane is weighed and unloaded by the cartman unless any cartman is not prepared to receive payment that day. Price of cane imported by rail is paid to the contractors whenever they call for payment at our office otherwise we pay fortnightly.

43. The average price of cane per maund of cane has been as follows:—

	Per md.	
	As.	P.
1930-31	6	3
1931-32	5	11½
1932-33	5	7½
1933-34	5	7
1934-35	5	9
1935-36	5	7½
1936-37	4	7

Yes, the prices do vary at different periods of the season depending on the sucrose contents of cane and rate of sugar and quantity of cane available.

44. The prices of cane are governed by the formula under the United Provinces Cane Rules.

45. Prices of gur do govern prices and supplies of cane. If gur prices improve there is bound to be a rise in the cane prices. Khandsari sugar does not play a very important part in our district.

46. Yes. There have been considerable variations in the prices of gur and reason being that the demand from outside is practically *nil* for instance there was big demand of gur till two or three years ago and plenty of gur was sent out to Great Indian Peninsula and Bombay, Baroda and Central India Railways for eating and prices therefore ruled very steady. Since last year gur prices are not very favourable almost all over the country at reasonable rates. Another reason for there being no demand of gur in our area may be that there is an all round increase in the cane cultivation in country.

47. We paid prices in excess of the minimum rate fixed by the Government when we felt that there was shortage of cane or when the cane was likely to be diverted to making of gur.

48. The prices of cane should be disconnected from the prices of sugar and should be fixed on the cost of production of cane as ascertained by the Tariff Board in its present enquiries.

49. The idea of paying a bonus for early and late varieties of cane is very good but very well organized arrangements will be needed for supply of such cane.

50. The duration of crushing has been as follows:—

	Days.
1930-31	163
1931-32	148
1932-33	181
1933-34	159
1934-35	115
1935-36	153
1936-37	156

160 days I think is a sufficiently long period for crushing if rates of sugar are not very bad and the margin of profits is not very low. The reason for variation is nothing else but shortage of cane.

51. The cane season can be extended by introduction of early and late varieties of cane but I do not know if that is the need of the moment. There is already an overproduction of sugar and if the factories extend their season we are likely to glut the market still further.

52. Imperial Council of Agricultural Research has been useful to industry towards bringing up new varieties of cane. Agriculture Department have been useful in some places but we have not derived any benefit so far. The only suggestion that I can put forward is that the Government Experts must move round and visit some places but I do not think they are much help to the cane-growers.

Labour.

43. Skilled labour is employed practically all the year round, even in silent season. Unskilled labour is employed only in the working season.

54. We do not import any skilled labour in our factory from abroad. Of course there are some employees belonging to the provinces like Punjab. Bihar and Bengal.

55. All labour is Indian.

56. Adequate quarters have been provided for the staff. Mill school is running and a club is also provided and up-to-date dispensary arrangement for out-door and in-door patients are made.

Power.

57. We have not been able to eliminate coal and firewood. Amounts spent in connection with fuel consumed is as follows. There is no surplus bagasse and therefore question of baling does not arise.

	Rs.	A.	P.
1930-31	40,439	6	10
1931-32	28,531	4	9
1932-33	67,330	10	0
1933-34	41,188	0	9
1934-35	32,819	0	0
1935-36	20,651	0	0
1936-37	26,694	1	3

By-products.

58. *Nil.*

59. Outturn of molasses is about three per cent. on hundred maunds of cane. Output of molasses for the last seven years is as follows:—

	Mds.
1930-31	87,356
1931-32	80,132
1932-33	78,702
1933-34	54,600
1934-35	48,430
1935-36	94,660
1936-37	81,706

60. Causes of variation are governed by the quality of cane. If the quality of cane is poor or cane is deteriorated outturn is higher and if the cane is of good quality outturn of molasses is less. Market for our molasses is Bengal but since last year we have been selling our molasses to the Indian Molasses Company, Calcutta. Railway facilities are adequate and molasses tanks are supplied by the Railway to the said company. Freight from Basti to Sonepore and Barauni per tank is as follows:—

	Rs.
To Barauni per tank wagon	42
To Sonepore	30

61. We sell away our molasses. There is no other way of disposal. I have not studied the utilization of molasses in detail but I have been told that only economical way of using molasses is to make power alcohol.

62. Question does not relate to our factory.

63. I have no suggestion for using of any other by-products excepting that the press mud could be used as a manure.

64. Figures are as follows:—

	Bags of 2½ mds. each.
1930-31—	
Beginning	471
End	18,825
1931-32—	
Beginning	136
End	32,350

	Bags of 2½ mds. each.
1932-33—	
Beginning	3,121
End	41,615
1933-34—	
Beginning	641
End	13,700
1934-35—	
Beginning	765
End	42,430
1935-36—	
Beginning	39
End	58,966
1936-37—	
Beginning	4,518
End	61,203

65. The arrangements for storage of our sugar are ordinary pucca godowns with cement flooring. The capacity of our godowns is sixty thousand bags, *i.e.*, one lakh and fifty thousand maunds of sugar. We have not increased the capacity of our godowns for the last four or five years nor we contemplate any increase in the near future.

66. As a rule there is no serious damage or deterioration on account of shortage but when we make lower grades of sugar they get slightly damp during the rainy season. First sugars as a rule are not affected by the weather conditions.

67. As a rule damaged sugar is sold as damaged sugar but sometimes it is reconditioned.

68. Keeping quality of sugar be improved so far as I know firstly by improving the very quality of sugar secondly by making the godowns damp proof.

69. The damage in transit is mostly in wet weather and that is due to the atmospheric influences, unsuitable wagons and transhipments at junction stations.

70. Yes, it is very rare that we get wagons according to our requirements and many time delay in delivering sugar has been caused on that account.

71. Special type of wagons should be made for carrying sugar during rainy weather and special arrangements should be made for transhipments of sugar.

72. Average prices of sugar are as under:—

	Per md. Rs.	A.
1930-31	9	6
1931-32	11	0
1932-33	9	4
1933-34	8	8
1934-35	8	7
1935-36	8	6
1936-37	6	4

73. We are sending you herewith copies of our Balance Sheet.

74. The detail of depreciation written off each year can be seen from the Balance Sheet. Yes our rate is the same as allowed by the Income-tax Department, *i.e.*, 6¼ per cent.

75 & 76. Our Balance Sheet will show.

77. If we have to borrow we borrow from the Imperial Bank of India against stocks of sugar at 3¼ per cent.

78. That is for our Head Office to reply. Our Head Office is at 3, Montgomery Road, Lahore.

79. The fair return in my opinion should be at least ten per cent. on the block investment.

80. Forms duly filled in are sent to you herewith.*

81. By extending our plant we have been able to cut down our overhead expenses and saved fuel expenses also.

(ii) In fact we have not installed any efficient machinery.

(iii) We have been able to reduce our overhead charges by increasing our capacity.

(iv) One very appreciable economy that we have been able to introduce is that of lubricating oil. Since this change we are saving about four to five thousand per year on oil item.

82. I don't think under the present circumstances we can affect any further reduction or can make any improvement in recovery rate. We may be able to reduce working cost if we are prepared to spend more money on the plant or cane is somehow improved.

Marketing.

83. Principal Sugar Market centres in which we deal are as follows:—
Cawnpore, Bombay, Karachi and Ahmedabad.

84. The usual arrangements in the sale of sugar between manufacture and dealers are as follows:—

(*a*) Manufacture have either got their own offices or have appointed agents for sale of sugar to dealers. Regular contract is entered into between the factory and the dealer. The agents are paid commission on the sales. There are some guarantee brokers but I think very few manufacturers have got.

(*b*) I am not in a position to give you the information in relation of dealers and retail sellers.

85. The present sugar contract is suitable but there is a clause in the contract about the deterioration in quality which is objected to by the dealers and the factory is insisting on retaining that clause. It is very difficult for the factories to do away with that clause because the factories do not want to be liable for deterioration of sugar on account of change in weather or damage or deterioration during transit.

86. The wholesale prices during the last seven years have been shown under item No. 72. Our rates have practically been same in all the distributing centres. Sometime we make a difference of one anna per maund on sugar sent towards Bombay and Karachi but that is not the rule.

(*b*) We do not sell in retail and therefore we have no idea of the retail prices.

87. Rates between wholesale and retail prices do vary but fluctuation is not very wide. Retail dealer certainly likes to make profits on sugar purchased by him on wholesale prices.

88. I have no personal knowledge.

89. I have no personal experience whether Indian sugars deteriorate more rapidly though we feel that Java sugar should have better keeping quality because of its superior quality. There has been some improvement in keeping quality of Indian sugar. The quality of Indian sugar has considerably been improved and better godowns are being provided for storage.

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* Not printed.

90. There is no reason why Java or other imported sugars be preferred to Indian sugar. Some Indian sugars are as good as the imported sugar if not equally good and I cannot understand why any consumer should pay Rs. 2 or Rs. 3 per maund more for imported sugar unless there are some who are averse of using anything that is Indian or who are still under the impression that sugar manufactured in India is no good or who have very high tastes and they prefer to have very best sugar available in the market.

91. The quality of some of Indian sugars is nearly as good. Indian sugar is inferior in grain colour and keeping quality. Tol may be the same.

92. Sugar manufactured is not finished with the close of the season. It is carried all through the year and sometime next crop. Banks advance money against stocks at different rates for different parties. I am not a dealer so cannot give any definite information but what little I know, the same holds good for dealers.

93. I think marketing survey of sugar industry would be advantageous to the industry.

94. Yes, I do favour a Central All-India Selling Organization.

95. The idea of having standard of Indian Sugar is very good but the industry is not well settled yet and I do not think for sometime to come we could standardise Indian sugars. I think the basis suggested by the director of the Imperial Institute of Sugar Technology should be suitable.

96. We have done no business.

97. Standards could only be useful if all the factories combine and they are in a position to manufacture sugar according to the standards.

98. I have no experience.

99. Normal consumption of sugar in India is between ten to eleven lakhs tons. There are possibilities of increasing consumption in India and that can be done mainly by improving the tastes of the people living in Dehats. Almost everybody living in the towns is using sugar but there is a little use of sugar in Dehats. Sugar eating in spite of its cheapness is considered a luxury in villages. Another way of popularising sugar is to increase purchasing power of India. I think some prejudice is still left in remotest corners of the country against white sugar and it is better if this prejudice is removed.

100. Sugar is replacing gur but very slowly. The sweetmeats as a rule are made from sugar though gur sweets are still to be found in the villages.

101. I have not studied the question but I do not think we could compete with syrup, etc.

102. We have no record.

103. We have no authoritative information but about two years ago heavy stocks of sugar were left over in Java and they had to dump their sugar in India at unremunerative rates.

104. I do not think there has been any export of sugar but there is no reason why India cannot export sugar if the British Government gives preference to Indian sugar.

105. The effect of excise duty of 1934 and its addition in the year 1937 has hit the industry very hard.

106. There are no marketing arrangements for molasses so far as I know for export and if that is true I see no reason why we cannot export molasses direct.

108. But for this protection the industry could not have expanded as it has done nor could have earned enough to maintain itself.

109. The rate of protection should not in any case be lowered and I will be glad if it is raised. Indian sugar to-day is being sold at a price lower than cost of production. Sugar factories if they have to exist will have to organize themselves and will have to raise their prices and

pay better prices to cane-growers and if protection is lowered we will be tempting Java to sell sugar a lower rate and a stage may reach when we may see large quantities of Java sugar in India. Personally I feel that Tariff walls should be so high as not to permit any sugar whatsoever. It is only India where everything from all countries could be imported. Country like Italy, Germany, so far as I know, do not and could not tolerate any foreign things in their country. The Tariff walls are so high that purchase of foreign things is almost impossible. I do not know why India should not copy those countries. We must do away with the remotest possibilities of Java or any foreign sugar selling in India and we cannot do that if we lower the production.

110. The other form of assistance other than a protective duty may be as follows:—

(1) Improved quality of cane.

(2) Acquisition of land for the factory for cultivation.

(3) Government Experts should visit factories and suggest economy and improvements on the spot.

(4) The Association of Sugar Manufacturers be recognized by the Government and the Association should have power to force the sugar mills to join the Association and to abide by its decision.

(5) Utilization of by-products.

(6) Transportation charges on raw material and other requirements of the factory should be nominal.

(7) Railway should give preference to sugar mills.

(8) The Government should co-operate with the mills in acquiring land or finding outlets for dirty water, etc.

(9) Research Laboratories should be opened in all the important centres and they should be accessible to the factories.

(10) The manufacture of parts of sugar machinery should be encouraged in India.

(11) Licencing of factories and extensions as already stated above.

111. I do not know the effect of import duty on molasses. I have no information if the duty on molasses has adversely affected any industry in India.

The Basti Sugar Mills Co., Ltd., Walterganj Factory, Basti.

1. Our factory started crushing cane and manufacture of sugar in December, 1932. When purchased it was a 400-tons plant. Its present capacity is about 700-tons.

2. The output of our factory year by year from 1932-33 the year of commencement till 1936-37 is given below.

1	1 cry.			11 cry.			1 crd.			Misc.			Total.		
	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.
1932-33 .	31,357	20	0	12,090	0	0	20,306	13	0	707	0	0	64,460	33	0
1933-34 .	86,447	20	0	36,260	0	0	35,062	20	0	265	31	8	158,035	33	8
1934-35 .	87,525	0	0	1,270	0	0	51,730	0	0	140	0	0	140,665	0	0
1935-36 .	151,261	30	0	16,207	20	0	74,342	15	6	171	0	0	241,982	25	6
1936-37 .	207,982	20	0	1,505	0	0	28,217	0	0	168	20	0	237,872	0	0

3. (*a*) We don't think our factory is advantageously situated in the matter of cane supply. Factories in our immediate neighbourhood such as Basti, Babbnan, Jarwal Road, Nawabganj, Balarampore have always been able to get and crush more cane than we. The duration of their crushing period has always been longer. The cane grown in United Provinces, Bihar, and other parts of Northern India is Co. 213. It is not as good as Bombay cane which is much richer in sucrose.

In the matter of supply of lime, fuel, sulphur, gunny bags, press cloth, we are neither at an advantage nor at a disadvantage. Before the springing up of factories in Punjab, West United Provincess and on Rohilkhand & Kumaun Railway and East Indian Railway we had the markets of Punjab and North-Western Frontier Province for the disposal of our sugar. With the coming in of those factories that market is almost lost to us. Except for about a dozen mills of United Provinces we are at a disadvantage in the markets of Rangoon, Howrah, Madras, Calicut, Nagpur and Bombay. The only markets now left to us are Ahmedabad and Karachi, but both these markets combined together are not as good as Bombay, Calcutta, and Madras alone, but there is heavy pressure of sale in these two markets from Punjab and United Provinces mills and from some Bihar mills also.

(*b*) Our factory is situated on the Bengal and North-Western Railway Main Line running from Lucknow to Gorakhpore but we have always been experiencing trouble in the supply of wagons for carriage of sugarcane and sugar. The number of wagons for sugarcane traffic is very inadequate and the wagons for sugarcane traffic is very bad and the wagons supplied for carriage of sugar are usually unfit. They permit rain water to enter and damage the sugar. Besides they are not sufficiently air tight to prevent moisture-laden air coming into contact with sugar.

In the matter of roads we are served and fed by two/three kankar metalled roads but towards the close of the season, these roads break down and vehicular traffic in some cases becomes very risky and almost impossible. There are no feeder and approach roads nor are there any culverts. The supply of cane considerably falls down as a result of rains when the kutcha roads become impassable and water collects in low lands. There is no river or tramway service to this factory.

(*c*) We had no difficulty in the supply of labour skilled and unskilled.

4. Our process of manufacture is double sulphitation. The respective advantages and disadvantages of sulphitation and carbonitation are as follows:—

> The initial and running costs of a sulphitation plant is low and its working not so difficult but its life is shorter and the sugar produced is not as good as in the carbonitation process.
>
> The carbonitation plant is costlier to purchase and costlier to run. Expenses of limestone and coke are very heavy and a major factory in the cost calculations. This process yields whiter and better sugar.

5. No changes in the lay-out of the plant have been made beyond varying the position of two sets of centrifugals. They were parallel to each other before and are at right angles now. This was done with a view to providing more light and improving supervision and control.

We have added—

1. Two boilers.
2. 5 1st settling tanks.
3. 2 2nd settling tanks.
4. 1 quadruple supply tank.
5. 1 quadruple.
6. 3 crystalisers.
7. 5 centrifugals.
8. 4 presses.
9. 1 survey cooling plant.

10. 1 Dry air vacuum pump.
11. 1 pressure pump.
12. 3 Magma mixers with three Magma pumps.
13. 1 filter with pump.
14. 2 fans and heaters for driers.
15. 2 sugar grinding machines.
16. 1 molasses burning plant.

We have replaced—

1. 1 cutter engine and a cutter.
2. 2 mill engines.
3. 1 injector water pump.
4. 2 boiler feed pumps.
5. 1 main juice pump.
6. 1 krajeski type crusher with a spliter type one.

We have increased the height of the chimney by 40 to 50 ft. and the length of two rotary driers by 10 ft. each.

The total amount spent on extension and replacements from 1932-1937 is Rs. 4,15,717-10-10.

The extensions and replacements contemplated are the following but we have no funds:—

1. Addition of a mill or a shredder.
2. Maceretors.
3. Juice heater.
4. Extension of the length of cane carrier.
5. A sugar sifter and a cooler.
6. Arrangement for drying of sugar in centrifugals, etc.
7. Addition of a few presses.

7. (*a*) The factors which determine the size of an economic plant are—

1. Availability of raw material chiefly cane.
2. Quality of cane.
3. Railway freight to the consuming market.
4. Plentiful labour skilled and unskilled.
5. Landed cost of other raw materials such as fuel, lime, sulphur, gunny bags, press cloth, etc.

Plants smaller than the average are at a disadvantage because of their relatively higher overhead, and plants with crushing capacities much in excess per unit of production and plants with and the cane available suffer from the disadvantage of being to a substantial extent dependent on rail-borne cane. This means higher average price of cane and consequently higher cost of production.

(*b*) We think that under the existing conditions 600-tons plant is almost the smallest economic unit.

8. We don't think any satisfactory equipments for a sugar factory are obtainable in India. Everything from a cane cutter blade to a pan and boiler has to be imported from abroad. Filter presses, tanks, crystalisers, rotary driers are obtainable in India. Messrs. Jessop and Co. of Calcutta have built and set up a few complete plants but they have not had a sufficiently long trial yet. Further we don't think they can by themselves single handed meet the requirements of the whole of the Industry.

9. We have received no technical assistance from:—

1. The Imperial Institute of Sugar Technology.
2. From the Industries Department of the Local Government.

10. Yes, we do cultivate sugarcane ourselves. We have not purchased the land but have got it on lease. No land is available on sale basis, the landlords being unwilling to sell. Even in obtaining land on lease, we have had great difficulties for the land is parcelled out into small holdings which the tenants are not prepared to vacate.

11. The information called for is given below—

(*a*) Area held 108 acres.

(*b*) Average area under cane each year 72 acres.

(*c*) Varieties of cane grown Co. 213 and 312.

(*d*) Usually ⅓rd of the area is under new crop, ⅓rd under ratoon and ⅓rd is lying fallow. We don't take more than one ratoon crop. Crops are manured with cow-dung, press cake, and occasionally with potash mixture fertilisers. Cowdung manuring is at the rate of 600 maunds to an acre.

(*e*) The average yield per acre was—

	Maunds.
1934	350
1935	260
1936	270
1937	438

Co. 313 was cultivated for the first time in 1936-37 and the yield was approximately 700 maunds per acre. No special analysis was carried out about the sucrose contents of various varieties.

12. We have set aside no area for experiments in cane cultivations and for production of seed for sale or free distribution to cultivators.

13. We have made no experiments in the cultivation of early and late varieties of cane. We tried potash mixture manure alongside cowdung manure and found that the chemical fertilisers helped in the germination of cane. We never approached the Agricultural Department for assistance or advice.

14. (*a*) The quantity of cane has been progressively on the increase. In 1933-34 we crushed 1,686,533 maunds 10 seers; 1934-35, 1,474,911 maunds 10 seers; 1935-36, 2,525,645 maunds 10 seers and in 1936-37, 2,267,617 maunds. No figures are given for 1932-33, for we started late that year and we were having mechanical breakages and stoppages as the plant was not working satisfactorily. In 1934-35, the cane crop was destroyed by drought and failure of early rains. In 1936-37 it was damaged by floods.

(*b*) The cultivation of local and desi varieties such as saroti, barokha, mamcha, etc., has been decreasing regularly. We received in 1932-33, 16·2 per cent.; in 1933-34, 2·9 per cent.; in 1934-35, 1·9 per cent.; in 1935-36, 1·7 per cent. and 4·0 per cent. in 1936-37.

15. We don't think cane in Basti area suffered from frost, disease or insect pest for the last five years.

16. The supply of cane here has been neither sufficient nor insufficient. The principal variety of cane crushed is Co. 213 which comes to over 90 per cent. of the total cane crushed. Of the remaining 10 per cent. and under the principal variety is Saroti. We have no information about the field yield of local varieties.

The sucrose contents of each are:—

Munngo	11 to 11·5 per cent.
Saroti	8 to 8·5 ,,
Barokha	7·5 to 8 ,,
Mamcha	7 to 7·5 ,,

17. All the factories are linked together. Difference in the rates of gate cane in any factory in our neighbourhood has always resulted in the movement of cane from one factory to the other, more particularly so when the low rate is coupled with congestion at the factory gate. The distance and the condition of the roads are some of the other factors which have weighed with the cartmen.

18. (*a*) The area under cane in our neighbourhood has been steadily expanding.

(*b*) (1) If the rainfall has been early say in March/April there have been more of cane sowings but the delay or failure of rains has not prevented the growers from the cultivation of cane.

(2) When sugar rates were high as in the year 1932-33 the prices paid for cane were also high, being As. 6 to As. 6-6 and towards the close of the season the cane prices rose as high as As. 7 to As. 9. On account of the progressive fall in sugar rates in the year 1936-37, the sugarcane rates came to as low as As. 4-3 per maund *plus* special reduction allowed by the Government on account of the special situation created by the imposition of additional excise duty in the middle of the season and likelihood of a large cane crop being left over unmilled.

(3) When the gur or jagri prices are high say Rs. 3 or above, the cultivators at once switch over to the manufacture of gur especially in areas situated at a distance of more than 15 miles from the factory gate.

(4) The prices paid for sugarcane have always been much higher than that for any other crop.

19. The production of sugarcane in our area has certainly not been in excess of our requirements. This factory can easily crush 28 lakhs maunds of cane in five months. Our sister factory at Basti can absorb 30 lakhs maunds of cane or perhaps more. With a bit of extra effort these two factories can crush about 65 lakhs maunds of cane. The cane being not in excess of the crushing capacity of the factories here, restrictions are not called for.

Restrictions may be called for when the total crop in this area exceeds 90 lakhs maunds of cane, for about 25 lakhs maunds of cane is absorbed by this area in gur manufacture for local consumption, chewing, seed, etc.

20. An average cultivator's cost for cultivating an acre of cane is as follows—

	Rs.
Seed	10
Watering	9
Ploughing, Hoeing and Levelling	8
Manure	10
Rent	9
Total	46

His average yield is 450 to 500 maunds per acre.

21. The main difficulties of cane-growers are the scarcity or too much of rainfall with the attendent problems of lodging cane and its marketing. There are no approach roads from the fields to the main roads. In some cases the fields are fairly 5—6 miles away from the roads. There is heavy accumulation of carts at the factory gates. We try to regulate this traffic by issue of parchas, etc., as much as we can. The construction of approach and feeder roads and culverts therein and the maintenance of the pucca roads in traffic worthy conditions will go a long way to increase the life of carts and the removal of hardships to cartmen consequent on breakdowns.

22. (*a*) We think that the objections which held good at the time of the last Tariff Board holds good still.

(*b*) We are in favour of zoning and allotment of special areas in the factories but we don't think such a scheme can be easily worked. This allotment of area should be, however, subject to revision from year to year.

23. We do not think cultivators in our area are in need of advances of cash. The cane grown in this area is mostly of the improved variety Co. 213 and therefore, there exists no reason for the supply of seed Co. 213. As for manure, the cultivators use manure of their own bullocks. Some of them do purchase fertilisers but in very sparing quantity. We will be prepared to advance money for seeds of late, early varieties and other varieties likely to yield sugar more than Co. 213. For development of feeder roads we are prepared to advance money up to a reasonable limit provided it is secured and guaranteed to be paid back to us in a reasonable period of time. This money is to be spent on the construction of roads to be approved by us. This however, is a matter primarily for the Local Boards.

24. (*a*) Yes, we are in favour of fixation of quotas based on the crushing capacity of plants.

(*b*) Yes, we are also in favour of licensing of new factories and extensions to the existing ones. The licensing should be in the hands of an All-India body and should not be left to the Provinces.

25. The percentages of gate, rail, and tram-borne cane are as follows:—

	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Gate cane .	75·63	87·71	82·18	82·96	89·92
Rail cane .	24·37	12·29	17·82	17·04	10·08
Tram-borne cane	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*

As mentioned above the proportion has varied from year to year according to our view and estimates of the cane in our neighbourhood and its availability at the gate and at out-stations, and availability of room at out-station sidings. Another determining factor has been the rates of sugar.

26. Our gate cane is mostly carried by carts and to a negligible extent by river boats also. The average per cart varies from month to month. It is low about 16 maunds per cart in the beginning, rises to over 21 maunds in March, drops down to between 20 to 21 in April. The average for the season is between 19 and 20. We have not used any rubber-tyred carts.

27. The mileage of roads in our vicinity is certainly not adequate. There are absolutely no feeder roads nor any roads connecting one main road with another. We mentioned somewhere also the condition of the roads is anything but satisfactory.

28. We draw cane by road upto a distance of 20 to 30 miles or about. Some of the cane occasionally comes from as far off as 35 miles. The growers take 2 hours to out and strip cane and 10 hours more to bring to the factory gate. 24 to 60 hours more elapse between its arrival at the gate and its weighment. During road transport, the cane is not protected from deterioration in winter months but it is protected against dryage during April/May or thereafter. Water wherever available is also sprinkled on the cane.

29. The cartmen while bringing cane incur no expenses. They leave their villages after they have taken their meals and carry their provisions with them.

The rates of hire are as follows:—

0 to 10 miles	Anna 1 per mile.
10 to 20 miles	Annas 1-6 ,,
20 to 30 miles	Annas 2 ,,

Growers prefer to cart their cane in their own carts. Some cane, however, is also carted on hire.

30. There are ferry tolls on the river Rapti at Domariaganj and Bansi. The charge is As. 4 for a loaded cart and As. 2 for an empty one.

31. We have no control over the cane supplies. Cartmen come from all directions and from any number of villages and so cannot be asked or compelled to supply cane according to a certain pre-arranged plan. The supply is, therefore, not uniform. It is highest in January and starts falling off in February and March according to the quantity of cane still left in the fields. The duration of detention of carts at our gates is 24 to 60 hours, the longest detention being in January. At the late end the detention is nominal, not extending to just more than a few hours. We have no control over the cane till it reaches the factory gate and consequently we can do nothing about prompt delivery. We have arranged to distribute parchas according to the order of arrival of carts so that no cartman can take undue advantage upon the other. From December to February we take no rail cane so that the period of detention of carts is reduced as much as possible.

32. Before the fall in sugar rates and imposition of excise duty and its subsequent enhancement, we used to import cane from as far as 120 miles or so. Now we generally confine ourselves to a distance of 35 miles or under. The average time taken between cutting of cane and its booking from an out-station to a factory differs from station to station, depending upon the available supplies of cane at each station. At Tinich, our next station, the time between cutting and its delivery to the factory is round about 16 hours but at Gaur, the station next to Tinich, and Maskunwa a little farther off still, the total time taken may be as much as 40 hours or more.

There is shortage of wagons for sugarcane traffic. They are much below the requirements of the industry. Besides, all the trucks are not of the open type. A great difficulty is experienced in loading and unloading covered wagons. Further they do not take the full carrying capacity loads for which freights have to be paid. We do receive reports of pilferage of cane from open trucks at almost all railway stations. The railway has got no arrangements for weighment of cane at booking stations but is always complaining of overloading. Because of the non-existence of weighment arrangements and railway officials quite a number of wagons reach us underloaded.

33. The railway freights are charged on the basis of the carrying capacity of the wagon to be loaded and also on the type of the wagons. The freights are charged on wagon miles with certain fixed minimums. In this connection please refer to Traffic Manager's Circular No. R.C.O. 2/36/1, dated 1st September, 1936. No changes have been made in the freight rates. The rates that used to apply in 1932 continue to apply still. In April and May, 1937, on account of abnormal cane situation and Government's interest in the milling of cane likely to be left over uncrushed, special reductions were made. We shall like the present arrangement to remain unaltered. The substitution of maundage rate will create needless work both for the railway and the mills. If, however, the general opinion prefers the flat rate we have no objection to that also.

The prevailing freight rate for an 8-ton open wagon is As. 2-6 per wagon per mile with a minimum of Rs. 5. This works out to roughly, ·14 pies per maund per mile. This figure ·14 pies per mile per maund may be adopted as the basis weighment at booking and a destination stations. If railway do not want to put up weighbridges at the booking stations, we will suggest that they accept the factory weights, for every factory is equiped with a weighbridge to weigh loaded wagons.

34. There were special reduced rates for sulphur which remained in force for 3 years but which have been withdrawn since 1st December, 1936. We shall like to have again the old special rates. The reduced rate on lime is 125 per cent. of its sale price. If it can be reduced so much the better, otherwise the special rate should not be withdrawn like that of sulphur freight and surcharge on coal are extremely high. Special freight on iron and steel has also been withdrawn since 1st December, 1936.

35. We have no tramway line.

36. Apart from the question of finance we should consider a tramway system generally advantageous. This is in view of the shortage of railway stock, chances of freshness of supply, elimination of congestion at factory gates and the connected problems of control, etc. The special difficulty likely to be experienced in the tramway system is acquisition of land.

37. There is a fall of up to four degrees in purities of juices owing to delay in delivery by road and rail.

38. The proportions of cane purchased direct from the growers and through the Agency of contractors in the various years are as follows:—

	1932-33	1933-34	1934-35	1935-36	1936-37
From growers	75·63	87·71	82·18	82·96	89·92
From contractors	24·34	12·29	17·82	17·04	10·08

39. We do not enter into any arrangements with the cultivators nor advance cash nor provide any seed nor manure nor give any other assistance.

40. The cane at gate is purchased direct from the growers. The rates of commission allowed to contractors for supply of cane from out-stations have been as follows:—

	Rs.	A.	
1932-33	4	0	per cent.
1933-34	3	8	,,
1934-35	3	0	,,
1935-36	3	0	,,
1936-37	2	8	,,

41. No Cane-growing or Cane-supplying Association ever approached us for supply of cane.

42. Loaded carts of cane are weighed 24 hours at two weighbridges. Empty carts are weighed at the 3rd weighbridge. Payment of cane is made from 6 in the morning to 6 in the evening. Anybody who wants payment in these hours is welcome. About 80 per cent. of the cane is paid within these 12 hours. The remaining 20 per cent. can also be paid within these hours, but some of the suppliers for reasons of convenience and avoidance of collection of money by the landlords and its safe deposit with the Company choose not to have the money for some time and that is why some parchis remain unpaid.

43. The prices of cane paid during the last five years that this factory has been in existence have been as follows:—

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average.
	As. P.	As. P.	As. P.	As. P.	As. P.	As. P.	As. P.
1932-33 .	5 0	6 0	6 0	6 0	6 0	6 0	5 8·85
1933-34 .	5 0	5 0	5 0	5 0 and 4 9	5 0	5 0	4 11·68
1934-35 .	5 0	5 0	5 0 and 6 0	6 0	6 0	6 0	5 4·35
1935-36 .	5 6	5 6 and 5 3	5 3 5 6 and 5 0	5 6	5 6	5 6	5 4·22
1936-37 .	4 9	4 9 and 4 6	4 9 and 4 6	4 6 and 4 3	4 3	4 0	4 5·9

Except for the season 1936-37 the cane prices have always tended to go up in February and after, particularly so at and near about the close of the season.

44. Under the United Provinces Sugarcane Act prices of sugarcane have been regulated by the Government since 1934. Before this Act came into force and when the sugar rates were high and excise duty non-existant, the usual rate of cane was As. 6 per maund. Sometimes this went up as high as As. 8. We don't think any mill paid less than As. 5 per maund.

45. A grower of cane from within a radius of 20 miles from the factory prefers to sell his cane to the factory at As. 5 per maund to converting it into the gur and selling it as such at Rs. 3 a maund or under. If the gur price remains at or under Rs. 2-4 per maund a grower will prefer to sell at As. 4 a maund rather than convert his crop into gur. If the price of gur goes up to Rs. 3-2 a maund, a fairly good proportion of cane is diverted from mills and they have to push up the price of cane if they do not want to cut short their season. The quantity of khandsari sugar made in this area is negligible and is not a factor to be reckoned with.

46. Yes, there have been considerable variations in prices of gur from year to year but on the whole they have been progressively falling. This is because of the dwindling gur market due to non-working or partially not working of gur refineries and also because of the low rates of sugar which has led to the contraction of gur consumption.

47. Yes, we have paid prices in excess of the minimum rates fixed under the Sugarcane Act and Rules. This was mainly because of the gur rates and the diversion of cane from factory to gur manufacture. In the year 1935-36 we pushed up the prices by two pice per maund and in 1936-37 by one pice per maund.

48. The basis of prices of cane fixed under the rules is anything but satisfactory. It bears absolutely no relation to the sugar value, *i.e.*, to its sucrose contents. Further it is linked to sugar prices which follow no definite course. In 1936-37, it has led to the anomaly of cane prices being highest when cane was immature and poor in sucrose and its price being lowest when it was richest in sugar value and had got dried up. The cane prices should be lowest in November and highest in February, a little lower in March and a little lower still in April and so on. The cane price should not be subject to periodical variation. The present formula has created a vicious circle. Lower sugar prices have led to a fall of sugar rates depressing the value of sugar produced and in stock already and to be produced thereafter.

49. We do not think under the existing conditions and state of industry any system of bonus can be a feasible proposition.

50. The duration of our cane crushing season has been as follows:—

Season.	Duration. Days.	Remarks.
1932-33	128	Season cut short because of machinery trouble.
1933-34	142	Crop very poor.
1934-35	107	
1935-36	146	
1936-37	131	Cane damaged by floods.

So long as other factories continue to work in April and also in May and June, it cannot be economical for us to stop crushing in March and April, specially in these days when there is no margin between cost of production and sale price.

51. Neither late nor early varieties of cane have been grown and tried here and consequently nothing can be said about the extension of the crushing season they may cause and bring about.

52. We don't think we have received any assistance from the Imperial Council of Agricultural Research and Co-operative Department of the Government. A representative of the Agricultural Department, however, occasionally visited our sugarcane farm and gave us his advice.

53. We employ the following labour in the crushing and the silent season.

	Season.	Silent season.
Skilled labour	79	43
Unskilled labour	681	122

34. A few fitters and the supervising staff in general come from the Punjab. The other labour skilled and unskilled which constitutes the bulk is entirely from United Provinces.

55. We have so far never employed any foreigner in our mills excepting during the erection period.

56. We have got 35 family quarters for the staff and the skilled labour, and 43 bachelor and fitter quarters. We run a free charitable dispensary and a school for the children. Facilities have been given to the employees for building of an Arya Samaj and a Gurdawara. A club also is being run which is open to membership of all. The club has got a lawn tennis, badminton, volley ball courts, and cricket field attached to it. Benefit of provident fund has been allowed to the staff.

57. We do not find bagasse to be sufficient for our requirements. We have had to supplement our requirements of fuel by coal and firewood. The amounts spent on fuel during the last five years are as follows. These are inclusive of off-season fuel expenses.

	Rs.	A.	P.
1932-33	22,680	0	9
1933-34	26,575	7	3
1934-35	27,874	7	1
1935-36	20,548	14	10
1936-37	34,764	12	1

As mentioned above we never had any surplus bagasse and we never had an occasion to bale it.

58. The bye-products produced in our factory are molasses and press mud.

59. The outturn and the average price of molasses obtained by us for the last five years are given below.

	Quantity produced.		Average price obtained.
	Mds.	Srs.	Pies per md.
1932-33	25,802	0	9·02
1933-34	54,812	0	3
1934-35	42,772	17	10
1935-36	73,243	0	10·0
1936-37	62,347	0	12·3

60. The molasses was usually purchased by Burhaj Bazar dealers who used to concentrate it and then export it by river to Bengal for local consumption and curing of tobacco. Very little quantity was despatched by us by rail till 1934-35. Railway freights from Walterganj to Burhaj Bazar

to which place it used to be occasionally booked and to Sonepore, Semaria Ghat and Plezaghat are as follows:—

	Rs.	
Semariaghat	61	per Tank of 300 maunds.
Sonepore	31	,,
Plezaghat	47	,,

The molasses wagons now being run by the Indian Molasses Co., Ltd., and the Bengal and North-Western Railway do not appear to be sufficient.

61. Any molasses that could not be sold was destroyed. If the Government can see their way to grant licenses for the distillation of alcohol and make the admixture with Petrol of power alcohol compulsory, we may put up one of these plants.

62. As mentioned above we never had any surplus bagasse. Bagasse can be used as a raw material by the Card Board Industry. Possibly it can also be used as an insulating material like celotex.

63. We are using our press mud as a manure in our farms. It is being used along with cowdung manure and so nothing definite can be said about its utility and its value as a manure.

64. The figures of our stock of sugar at the commencement and close for each of our crushing season are given below:—

	Opening stock.	Closing stock.	
1932-33 . . .	...	16,921	bags of 2½ mds
1933-34 . . .	150	3,038	,,
1934-35 . . .	196	35,115	,,
1935-36 . . .	2,100	57,966	,,
1936-37 . . .	3,676	45,832	,,

65. The sugar is stored in pucca godowns packed in "A" Twill Jute Bags. Some of the godowns are cemented from below and other are cement pointed. We had godown capacity for 30,000 bags in 1932-33, 45,000 bags, in 1933-34, 35,000 in 1934-35 and 70,000 bags in 1935-36 and 1936-37. As will be clear from the godown capacity figures we have had to increase our godown capacity in a number of seasons. We are not contemplating any further increase.

66. During the rainy season and the consequent high humidity, the sugar does absorb moisture and become wet. Lower polarisation and smaller and softer crystal sugars absorb more moisture than higher polarisation and bigger and stronger crystal sugars. II crushed bags become one big lump.

67. The damaged sugar is disposed off as such. The *beoparis* are asked to see the condition of the sugar and bags themselves and make their offers for it. Damaged sugar fetches us lower rates but we prefer to sell it as such to carrying it over to next year. If, however, any sugar is left over and occasionally it has been so, such sugar has been reconditioned.

68. Keeping quality of sugarcane be improved so far as I know firstly by improving the very quality of sugar, secondly by making the godowns damp proof.

69. In rainy season, sugar is considerably damaged in transit from factories to destination. The damage is due to leaky wagons and on account of their not being airtight. Another cause of damage is non-provision of adequate arrangements at transhipment and destination stations.

70. Yes, we very often experienced difficulties in obtaining of wagons for loading of sugar. These have been more acute in the busy crushing and rainy seasons. On account of the non-supply of wagons, our despatches have been often held up for two weeks and occasionally for three, four and over.

71. We should welcome wagons with leak-and rain-proof tops and sides and airtight doors.

72. We have been selling sugar on f.o.r. factory basis. The rates obtained from ports and up-country dealers have, therefore, been the same. The freight rates from factory to some of our important markets are as follows:—

	Rs.	A.	P.		Rs.	A.	P.
Cawnpore .	0	6	4	Ahmedabad .	1	0	3
Amritsar .	1	4	6	Karachi .	1	0	3
Peshawar .	1	15	7	Bombay .	1	0	6

73. For copies of our Balance Sheets please refer to our Head Office. These Balance Sheets are combined for Basti and Walterganj factories which are owned by the same company.

74. The particulars of amounts written off for depreciation are as follows:—

	Rs.	A.	P.
1932-33	20,708	4	0
1933-34	83,073	10	5
1934-35	85,554	9	8
1935-36	87,244	6	4
1936-37	91,775	0	2

The rates of depreciation are more or less in accordance with those allowed by the Income-tax Department. In 1932-33 only Rs. 20,708-4 were set apart for depreciation.

75. The amounts set aside towards Reserve Fund every year have been as under. These are for two factories Basti and Walterganj combined.

	Lakhs.
1932-33	2
1933-34	2½
1934-35	*Nil.*
1935-36	2
1936-37	Not yet out.

76. We have only one class of shares and that is ordinary. Actual amounts distributed as dividends in each year are as follows:—

1932-33	25 per cent.
1933-34	25 ,,
1934-35	15 ,,
1935-36	25 ,,
1936-37	Not yet out.

These amounts distributed were out of the combined profits of Walterganj and Basti.

77. Working capital is raised from the Bank against the security of sugar stocks. The rates of interest paid in each year are as follows:—

1932-33	4	per cent.
1933-34	4	,,
1934-35	4 and 3	,,
1935-36	3	,,
1936-37	3	,,

78. For amounts of expenses debited to our account by Head Office, please refer to them.

79. Our Managing Agents receive a commission of 2½ per cent. on net profits. Net profits are determined after accounting for Income-tax and depreciation expenses.

Our share-holders will be quite content with a guaranteed return of 10 per cent. on the original block account of the two factories Basti and Walterganj combined. This is to be calculated without taking into consideration any amounts written off for depreciation etc. Out of this 10 per cent. some money will have to be set aside for Reserve Fund and some for contingencies and unforeseen expenses.

80. Forms* duly filled in showing the required information are attached herewith.

81. The reduction works cost will be apparent from the following figures. Our expenses per maund of cane in 1932-33 were As. 4-3, 1933-34 As. 4-3·8, in 1934-35 As. 4-0·5, 1935-36 As. 2-5·29, and 1936-37 As. 2-11·9.

82. There is not much room for any further reduction except in fuel. Some money may also be saved from Repair Machinery Account but not much. Repairs which are not very urgent can be held back but only temporarily and even then there is the risk of loss of efficiency and greater and oftener shut down periods.

83. In 1932-33, 1933-34, 1934-35, the principal markets of our sugar were, Cawnpore, Central India, Punjab and North-Western Frontier Provinces. In 1935-36, we exported a good quantity of sugar to Karachi, but in 1936-37 by far our most important market next to Cawnpore has been Ahmedabad.

84. We sell our sugar through our Agents to principal merchants who distribute it in their own instructions of the purchasers. The payment has to be made against documents which are invariably sent through the Bank. The bills are payable on demand. The sugar is sold on f.o.r. factory basis. In some cases earnest money is required from the purchasers at the time of the bargain and in other cases it is dispensed with. We have nothing to do with the retailers who purchase sugar from our dealers. In case of a claim for quality, short weight, damage to sugar the correspondence is carried on with or through our Agents, occasionally with dealers and rarely, if at all, with retailers.

85. The present Contract Form is a product of the joint efforts of the Merchants' and Manufacturers' Associations. They met in Calcutta, threshed out the matter fully and removed and narrowed down the differences so far as possible. The principal difference now remaining is that relating to clause 8 which runs as under—

"Goods to be of the fair average quality as per sealed sample given by the seller to the buyer or according to the Indian Standard sample No. which has been manufactured during the current season prior to the due date of delivery of the hoods provided that the seller shall not be responsible for the changes that may at any time occur in the appearance, grain or colour of the goods due to the inherent qualities thereof or atmospheric influence or changes that may occur during transit or to other causes over which the seller has no control".

We think the merchants are taking too narrow a view of the inherent properties of sugar one of which is to absorb moisture and so to deteriorate. To a certain extent this is unavoidable. We should in no way be understood to imply that there is no room for further improving the keeping qualities of our and Indian sugars or the condition of storage in the godowns. But even after all this has been done and sugar made as perfect as the present state of business knowledge permits, sugar still, on reaching destination and dealers' godowns will be found to be damaged. That will be because of damage in railway wagons which are neither proof against rain water nor are airtight and also because of damage at transhipment and destination railway sheds. The slightest exposure in rainy season when the humidity is very high is sufficient to cause the sugar to absorb moisture and so to deteriorate. We think the merchants should make an allowance for this inherent property of sugar and not raise any further objections to the insertion of this clause in the contract.

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* Not printed.

86. The wholesale prices during the last five years have been practically the same in all the distributing centres. Sometimes we make a difference of one anna per maund on sugar sent towards Bombay, Karachi, and Ahmedabad, but that is not the rule.

(*b*) We do not sell in retail and therefore, we have no idea of the retail prices.

87. Usually the difference between wholesale and retail prices is one to two annas per maund, but this tends to vary according to the position of the market, wholesalers, stocks in factories and imports of foreign sugars. In 1935-36 on account of remours of Abbysinian War and an under-estimate of Indian sugar production, the wholesale dealers lost very heavily and the retail dealers were, therefore, in a safer position. In 1935-36 the market was declining daily and the retailers could always take advantage of the lowest rates then prevailing. Their was and always has been hand-to-mouth policy. They are not prepared to take risks.

88. Some of the Cawnpore and other dealers have got their own godowns but we have not seen them. The sugar nearest the floor, the side walls and on the exposed sides is in rainy weather damaged more than the rest of the sugar.

89. Yes, Indian sugar used to deteriorate more than Java and other imported sugar. The reason of this was smaller and softer grain and lower polarisation. Undoubtedly there has been an improvement in the keeping qualities of Indian sugar. The grain now produced is comparatively harder and bigger. The lower polarisation 2nd and 3rd sugars are being remelted and replaced by 1st sugars of higher polarisation.

90. Indian sugar has now almost replaced Java sugar. Sugar of quite a number of factories now is as good as Java and even better. There may, however, be some persons who may be preferring Java and other foreign sugars. They are usually persons of fastidious tastes and foreigners who are ignorant of the quality of Indian sugars. This, we think, however, is a question of time and in a year or so more, even this market will be captured.

91. As already explained the quality of Indian sugar is progressively improving and some factories have made as good sugars as Java and other countries. The defects of Indian sugars used to be lower polarisation and smaller and softer grains.

92. The undelivered stocks are carried forward by the manufacturers and dealers in equal proportions of 50—50. These undelivered stocks are pledged to the Banks who usually are prepared to advance up to 75 per cent. of the market value of the sugar. If rates improve the margin of advance is improved and *vice versâ.*

93. There is no reason why a marketing survey of the sugar industry should not prove advantageous.

94. Yes, we do favour an All-India Sales Organisation provided its constitution, etc., are such as command our approval.

95. Yes, we are in favour of standardisation of sugar. The basis would be grain and colour.

96. (*a*) So far we have not done any business on the standards prescribed by the Director of Sugar Technology.

(*b*) We regret we have not made use of these standards even for grading purposes.

97. We have already said that we have not made use of these standards for any purpose and are, therefore unable to say anything.

98. A future market may tend to depress the market especially during the crushing season. Futures or terminal markets are difficult to control

and we don't think this stage has yet arrived when they can serve a useful purpose.

99. Up till last year the consumption in India was taken to be 10 million bags of 2¼ maunds each. On account of lower prices we estimate it at 11 million bags this year. With sugar rates at Rs. 6 and lower a good deal of gur and khandsari market is bound to shrink. Consumption may be increased by systamatised, organised and a sustained campaign in favour of the uses of sugar.

Factory sugar may oust khandsari sugar but we cannot visualise time when it will completely replace gur.

100. Sweetmeat sellers are always after cheap sugars. So long as there was a good difference of price between 1st sugar and 2nd sugar, they used to purchase 2nd sugars. With no or nominal difference they like to have 1st sugars. On account of lower rates they were and are purchasers of damaged and wet sugars. The lower and lower sugar prices go, the more and the more the sweetmeat sellers will make use of this sugar.

101. This problem has not engaged our attention so far.

102. We have no information and record.

103. Yes, we think that sugar was landed into India at unremunerative rates in the year 1934. Java sugar never sold so cheap ever before or after.

104. We have no record about the export of Indian sugar by sea and by land. Chances of export will improve by Government subsidy and admission of Indian sugar in Empire Markets at Certified colonial rates. The manufacturers will also have to revise their sales policy and to undergo some sacrifice for exporting sugars.

105. The excise duty of 1934 and its addition in the year of 1937 has hit the industry very hard.

106. In the year 1935-36 and 1936-37 we sold our Molasses to the Indian Molasses Co., Ltd.

107. Yes, Indian Molasses is exported, but we have no record and statistics.

108. The effect of the protective duty is reflected in the increase of sugar factories from 43 in 1931-32 to 157 factories in 1936-37 and their balance sheets for those years.

109. The protective duty must be maintained at the present existing rate otherwise Java and foreign sugars may restart coming in. So long as Java remains off the Gold standard the chances of dumping will be greater than otherwise.

110. We do not think any form of assistance other than protective duty will be as helpful as a protective duty.

111. We have no information and record.

The Popular Sugar Co., Ltd., Basti.

PRODUCTION OF SUGAR.

Introductory.

1. 1933-34; 600 to 800 tons.

		1st	IA	IB	II	IIA	Crushed Lumps.
2.	1933-34	4,400	...	...	...	...	...
	1934-35	24,302	6,869	3,760	3,263	105	5,708
	1935-36	28,464	5,648	11,749	1,348	...	123
	1936-37	61,136	35,453	...	...	...	58

3. (*a*) No; No;

(*b*) Facility of rail only.

(*c*) Yes.

4. Double Sulphitation.

In the sulphitation process, the plant is less expensive and the process is cheaper to work. On the other hand the carbonitation process is more positive in its action; yields a higher recovery, and the sugar produced is of a better keeping quality. The principal items which raise the cost of carbonitation are limestone which has to be used to a quantity about 4 per cent. of the weight of the cane and coke. The determining factor will therefore be the distance of the factory from the quarries and the coal-fields.

5. No change made in the lay out.

Extensions.	Approximate cost. Rs.
Crystallizer	2,500
3 Molasses tanks	2,000
Sugar Dryer	7,400
Sugar Elevator	1,500
Sulphur furnace	1,500
1 five B.H.P. electric-motor centrifugal pump	1,000
1 600 cft. capacity Air-compressor	4,000
1 5 b.h.p. electric-motor driven Molasses pump	1,150
1 two tons cupola	1,000
Steam traps at Pans	1,900
Water circulating tank for condenser water	300
Hot water tank	890
1 10 b.h.p. Electric-motor	500
2 Duplex pumps for water	1,000
Kacha Tank (outside the factory)	600

Replacement.—Apron type Intermediate carrier has replaced the scraper type Intermediate carrier at all mills—Rs. 11,000.

One turbine driven water injection pump capacity 300,000 gallons has replaced one high-speed engine driven pump; capacity 200,000 gallons per hour—Rs. 11,000.

6. Cane carrier length to be increased at least 30 feet; a battery of six centrifugal machines and accessories along with magma pump, and Magma mixer for double curing of sugars;

Seedler at Panfloor;
One syrup Sulphitation Tank;
Three settling tanks; and
Two waste-molasses measuring tanks.

7. (*a*) The overhead charges of a factory decrease relatively per unit increase of crushing capacity. The larger the factory, the less are the proportionate charges on skilled directing staff, depreciation and certain factory operations;

(i) Supply of cane at the gate and duration of such supply;
(ii) Size and number of rollers;
(iii) Heating surface of the evaporators;
(iv) Capacity of the pans; total heating surface of the boilers.

(*b*) 400 tons.

8. No machinery units, which are complicated and required expert engineering skill and knowledge, are available in India; small castings and other ordinary units, such as tanks, sugar centrifugal machines, sugar dryers, crystallizers and filter presses, etc., are manufactured in India.

9. (1) In the light of so much money being exacted by Government in the form of Taxation (Excise duty) from this Industry, in consequence of

which the sugar industry is on the verge of collapse, much more help should have come forth from the "institute" especially in research work, *viz.*, improvement in the manufacturing processes and remunerative utilization of bye-products than has been available so far.

(ii) No assistance worth the name has been given by the Industries department.

The Technical Institution can give us expert advice in the matter of manufacturing processes of sugar on modern and up-to-date lines by turning out much better technologists. The Industries Department should be able to help in the making of sugar, and finding fresh avenues for the use of sugar in various Industries; such Industries should be encouraged by advances of loans and protective duties; should secure reduction in Railway freight; should find fresh markets abroad by removing international trade barriers.

Raw Materials.

10. No. Does not arise.

11-13. Does not arise.

14. (*a*) Since 1933-34 when the Mill started, quantity of cane available at the gate has doubled.

(*b*) Coimbatore No. 213 has completely replaced Desi cane, the former is a better quality cane.

15. About 10 per cent. by diseases,

Practically no loss by frost in this area.

16. (i) No;

(ii) Coimbatore No. 213 and Desi Cane in very small quantity from out-stations;

350 to 400 maunds and 200 to 250 per acre respectively; Sucrose contents in Coimbatore 13 per cent. to 17 per cent. and in Desi 9 per cent. to 13 per cent.

17. 15 to 20 per cent. of our supply is generally influenced by the competition of other factories, when there is short supply during the latter part of the season, when we have to pay price 30 to 70 per cent. more; but during this season, owing to over-production of cane, this did not happen.

18. (*a*) Area under cultivation has increased from year to year, though not so much as around other factories; no other variation;

(*b*) (i-iv) Does not arise.

19. No; no restriction necessary.

20. Cost of cultivation—

	Rs. per acre.
(i) Ploughing	6
(ii) Seed	10
(iii) Manuring	6
(iv) Sowing	3
(v) Hoeing	7
(vi) Cutting and cartage	25
(vii) Supervision	2
Total	59

21. Scarcity of water for irrigation during the months of April to June when there are no rains. Factories are not linked by Pucca roads with important cane-growing areas. We would suggest installation of Tubewells, distribution of improved variety of cane-seed and manure by the Government and constructions of Pucca roads.

22. (*a*) The last Tariff Board were against compulsory acquisition on the grounds (1) that it would antagonise the expropriated ryot and his fellow-ryots and (2) that it would interfere with the traditional freedom of cultivation enjoyed by the Indian ryot. In our opinion these objections still prevail in full force, and the acquisition of land for a factory purpose should be left to voluntary negotiations.

(*b*) Zoning of the gate-cane only will benefit a very few factories, hence zoning at the outstations is more essential than that of the gate.

23. (*a*) Under the present financial condition of many of the factories, which has been extremely weakened by the levy of exorbitant Excise duty, it has become very difficult to give any assistance worth the name.

24. (*a*) & (*b*) (ii) Yes.

The reason is to regulate the production according to the demand; this will check the price of sugar from going down at present. The Licensing should be entrusted not to Provinces but to an All-India body.

25. (*a*) One-third.

(*b*) Two-thirds,

(*c*) *Nil.*

Our gate-cane supply has a tendency to increase, on account of increased crushing by the factory.

26. Entirely by carts;

16 maunds. It is only possible when there are pucca roads to factories and when the pitiable lot of the poverty-stricken peasants is improved of if the Government helps them otherwise. Does not arise.

27. Not at all;

Deplorable.

28. Within a radius of 10 miles; 36 to 40 hours.

It is not at all protected but is exposed to the inclemancies of weather.

29. Three pies per maund per mile. A few of them have got their own carts, but most of them have to hire. Average cost about 3 pies per maund per mile.

सत्यमेव जयते

30. Yes; cane conveyed from Nepal Territory.

31. The present supply of gate-cane is not so large as to require any special arrangement.

Four to eighteen hours.

Does not arise at present.

32. Up to 84 miles (Colonelganj).

72 hours.

Satisfactory, except for high freight, but most unsatisfactory during the last three/four weeks of the season due to paucity of wagons.

33. The freight is calculated on the carrying capacity of wagons according to mileage, subject to a fixed minimum amount. For the first time in the history of sugar, the railway reduced under the advice of the Government the freight for a short period during the latter part of the crushing-season to finish the cane, where there was over-production.

Yes, substitution of maundage rate per mile will be preferred.

34. In order to give impetus to this industry railway freight for all the raw materials necessary for the production of sugar, *viz.*, lime, sulphur, coal, firewood, gunny bags, lubricants and mill stores requires reduction.

35. *Nil.*

Does not arise.

Does not arise.

36. Yes when the cane is to be transported from 8 to 12 miles. Yes, acquisition of land and financial difficulties.

37. It is not possible to give an accurate idea about the extent of deterioration of cane owing to delay in delivery by road and rail. This of course depends upon the weather and the time taken to crush. The cane is usually sent to the factories in the stripped condition with their tops out. In some factories the experiments were tried with cane being imported from long distances with trash and tops and it was found that the extent of loss was only unappreciable. This practice has not found favour because of the labour that has to be employed at the factory gate and the other attendant dangers.

The cane as a rule should not deteriorate much during the cold weathers say from December to February, provided it is brought to the factory gate within 24—48 hours. But on account of the heavy congestions of the carts at the gate of some of the factories and outstations where the limited number of cane wagons are supplied cane seldom takes less than 48 to 72 hours and sometimes more to crush. This causes deterioration in cane in the fall of purities from 85 (average) to 82—83 and a dryage of 2 -4 per cent. of the juice. This means nearly a loss of 0·5 to 0·8 per cent. in recovery over the rail borne cane in particular where the distances are long and the supplies cannot be regulated according to the demand. During the hot weathers, *i.e.*, March to May the extent of losses in rail borne cane get still higher varying from 10—18 per cent. dryage and fall of purities from 80—72·74 per cent.

38. (*a*) One-third.

(*b*) Two-third.

39. None, financial position of the company does not permit the adoption of any such scheme.

40. No commission is paid for the cane received direct from growers. On cane purchased through middlemen, commission is Rs. 2-8 per cent. maund upto 50 miles and Rs. 3-2 per cent. maund for over 50 miles.

41. No.

42. Gate-cane is weighed at the factory gate by the company's own employees; the outstation-cane is weighed by the contractors at their purchasing centres and is again weighed by the employees of the company at the factory-gate. For the cane received by carts, payment is immediately made and for the cane through the contractors at an interval of 7 to 10 days.

		Per maund.			
		Rs.	A.	P.	
43.	1933-34	0	5	0	
	1934-35	0	5	0	to
		0	13	0	
	1935-36	0	4	9	to
		0	5	0	
	1936-37	0	4	9	to
		0	3	6	

44. Yes, since the enforcement of the sugarcane rules.

Does not arise.

45. Price of gur or jaggery does not now influence the price of cane.

46. Yes, slight variations according to the rise and fall in the price of sugar.

47. Yes, we have been paying in excess of the minimum price fixed under the cane Rules at the time of competitions. Also three pies per maund in excess was paid for a short period during the latter part of this season to encourage our gate-cane suppliers, although there was an over-production of cane in general.

48. Since the enhancement of the Sugar Excise duty this year, the basis of fixation of minimum price of cane requires revision. The cost of sugar cane should be calculated on the basis of the price of sugar obtained after the deduction of the Excise duty.

Alternatively.—Price of sugar-cane as well as sugar should be fixed on the basis of cost of production through Legislation by the Government for one complete year.

49. It will take a very long time to give a practical shape to this procedure.

50.

1933-34	1934-35	1935-36	1936-37
40 days.	114 days.	103 days.	147 days.

The variation is due to late erection in the first year and want of cane in the second year, machinery breakdowns in the 3rd year. Yes enough.

51. Crushing season can be extended by 2 months easily, one month by starting earlier and a month at the end.

52. Having no cane farming of our own, we are unable to say any thing personally, but from the reports given to us by cane growers in this vicinity, we can say that much more assistance should have come forth. No beneficial assistance was given by the Co-operative Society and Agriculture department of the Government hence we are not satisfied specially with the Co-operative Society, which serving as middleman, has done nothing in this direction excepting the enlistment of existing cane growers as their members to regulate the disposal of the cane on organised Parchi system. Government should establish in vicinity of each factory an experimental agricultural farm which should supply the latest improved seeds, manure and technical advice to the cane growers.

53. (1) *Skilled labour in Crushing Season.*—Fitters, Mechanics, Engine Drivers, Firemen, Turners, Blacksmith, Tinsmith, Khalasies, Welders, Moulders, Oilmen, Electricians and Fitter Coolies, etc., Panmen, Quadruplemen, Juice Supervisors, Workers on Centrifugal machine, Filter Press, Juice heater, Sulphur station, Eliminators, settling station and Palledars on bagging and stacking sugar.

Skilled labour in silent season.—Fitters, Mechanics, Electricians, Engine Drivers, Firemen, Turners, Blacksmith, Tinsmith, Khalasies, Welders, Moulders, Oilmen and sugars Palledars, etc.

(2) *Unskilled labour in season.*—Coolies at cane carrier, Bagasse carrier, Mills, Boilers, on wagon shunting and Building works, etc.

Unskilled labour in silent season.—Coolies at Boilers, on wagon shunting and Building works, etc.

54. None from abroad, 25 per cent. from the Punjab and 25 per cent. from Bihar and Orissa.

55. Does not arise.

56. Free quarters provided, proper sanitation, free hospital, school for the children of the employees, club, library and reading room maintained.

57. Last season very little amount of fuel other than bagasse had to be used. About 6 per cent. by steam coal and firewood.

The amount spent on fuel—

	Rs.	A.	P.
1933-34	11,285	5	9
1934-35	13,517	15	3
1935-36	13,804	6	9
1936-37	9,028	2	0
Total .	47,635	13	9

58. Molasses, filter press mud and bagasse.

		Maunds.	Per maund. As.	P.
59.	1933-34	7,040	10	0
	1934-35	49,297	2	0
	1935-36	47,412	2	0
	1936-37	94,600	1 0	6 to 9

Variation is due to large increase in production also cheapness of Jaggery and sugar to some extent.

60. Local market to a small extent. Indian Molasses Co., Calcutta. Railway and Bullock carts. No. As. 2-6 per maund Barhni to Barauni.

61. Does not arise Manuring, use in metalling the road, manufacturing Alcohol, fold for cattle.

62. No. Paper making.

63. Filter Press mud for fuel and for manuring.

64. 1933-34—No crushing no record.

1934-35—No stock at the start . 15,302½ bags at close of the season.

1935-36—No stock at the start . 38,256 bags at close of the season.

1936-37—No stock at the start . 48,820 bags at close of the season.

65. Pucca brick built walls, corrugated sheet roofing godowns. 45,000 bags. Yes. No.

66. 7 to 1 per cent. Dampness from flooring walls, atmosphere, bagging of hot sugar straight away from the sugar drier 0·04 per cent. by rats. More the molasses in sugar greater the deterioration.

67. Partly sold outright and partly reconditioned.

68. 60—70 per cent.

69. ·2 per cent. Improper arrangement at the transhipment stations where it remains lying in open for some time exposed to atmospheric conditions and partly due to theft at the transhipment as well as at destination stations.

70. Yes. During the crushing season there is generally very great paucity of wagons specially all over the Bengal and North-Western Railway which in every year results in appreciable loss to the manufacturers. When sugar prices go down, despatching instructions are generally received late from the buyers.

71. Wagons should be weather and leakage proof specially during the rainy season when a considerable quantity of sugar is damaged by moisture.

72. Prices at which our sugar has been sold during—

	I	II	Pisa.	IA.	I B.	IIA.	Lumps.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1933-34 .	8 10 6	8 5 3	8 7 3	..	..	..	..
1934-35 .	8 7 0 to 7 5 0	8 7 0 to 7 12 0	8 7 0 to 8 4 0	8 4 0 to 7 13 0	7 3 0	8 0 0	..
1935-36 .	8 2 0 to 7 14 0	..	..	7 14 0	7 5 0 to 7 3 0	..	..
1936-37 .	6 12 0 to 6 2 0	..	..	6 8 0 to 5 14 0	..	..	5 10 0 to 5 9 0

Present freight rate of sugar for despatch from Barhni—

	Rs. A. P. Per maund.
1. Calcutta	1 0 6
3. Cawnpore	0 7 7
3. Amritsar	1 4 11
4. Karachi	1 0 0
5. Bhavnagar (Kathiawar)	1 6 10
6. Ahmedabad	1 0 0

73. Enclosed 3 copies of Balance sheet.

	Rs. A. P.
74. 1933-34	*Nil.*
1934-35	*Nil.*
1935-36	41,795 1 9 depre-

ciation detailed thus:—

	Rs. A. P.
Plant and Machinery at 3⅛ per cent. (half the statutory rate)	34,142 11 6
Workshop Machinery and Weighing bridges at 3⅛ per cent. (half the statutory rate) .	1,537 3 6
Building at 1¼ per cent. (half the statutory rate)	4,184 3 6
Railway siding at 6¼ per cent. (half the statutory rate)	1,152 3 0
Drawing outfit and Instrument at 5 per cent.	17 9 0
Books at 10 per cent.	7 8 0
Tools and Plant at 6¼ per cent. . . .	513 13 0
Safe, Furniture and Fittings at 2½ (half) the statutory rate)	239 14 3
Total .	41,795 1 9

75 & 76. *Nil.*

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77. From Bank against stock of sugar at 3½ per cent. From Managing Agents at 8 per cent. without security.

78. Head Office Expenses—

	Rs.	A.	P.
1933-34	5,760	14	0
1934-35	3,000	5	9
1935-36	3,300	0	9
1936-37	3,504	3	7
Total	15,565	8	1

Managing Agents' Commission and rate of calculation and remuneration—

	Rs. A. P.		
1933-34	..	1 per cent. on sale proceeds.	5 per cent. on yearly profits.
1934-35	*Nil*	Do.	Do.
1935-36	22,615 2 0	Do.	Do.
1936-37	27,000 0 0	Do.	Do.

79. 10 per cent.

81. (i) About 5 per cent.

(ii) 10 to 11 per cent. approximately.

(iii) *Nil.*

(iv) 5 per cent. approximately.

82. A little.

83. Cawnpore, Karachi, Ahmedabad and Baroda.

84. A. Selling Agents.

B. Both direct and through brokers.

85. The sugar contract form prepared by Indian Sugar Mills Association will be suitable with certain modification.

86. Wholesale prices at—

1936-37—Karachi (A) Rs. 20 per bag (Indian).
(B) Rs. 13-5-6 per cwt. (imported).
1935-36—Karachi (A) Rs. 24 per bag (Indian).
(B) Rs. 13-5-6 per cwt. (imported).

87. Slight as well as wide fluctuation. Wide only for short duration. Wide when the speculators are in large numbers in the market and are unable to take delivery because of unsound financial position.

88. Pucca as well as Kacha shops and a few godowns.

89. Slightly. Yes. The best quality Indian sugar is as good as the best imported foreign sugar in keeping quality.

90. Yes. By a limited people and Europeans because of better look and appearance and partly due to national prejudice.

91. Sugar produced only by a few factories. Size, colour, uniformity and lustre in crystal.

92. 1934-35—Manufacturers 15,302½ bags at the close of the season.
1935-36—Manufacturers 19,527 bags at close of the season.
No stock at start of season.
1936-37—Manufacturers 2,493 bags at start of season.
25,281 bags at close of the season.

By Managing Agents, Banks and securities, Banks against stock, Managing Agents against building, Machinery and stores.

93 & 94. Yes.

95. Yes. On the basis of size, colour, lustre and uniformity of grain.

96. (A) *Nil.*

(B) No.

97. A material reduction in the price of the standards may end to popularise them.

99. (A) 11 lakh tons.

(B) Cheapness of the sugar which has already contributed largely towards increased comsumption. Construction of pucca road and advertisement in the interior of the country, encouragement of subsidiary Industries such as manufacture of sweets, biscuits, syrup and fruit preservation, canning, etc.

100. To a very large extent.

101. (1) When there is a protection duty from the Government. (2) When the Government helps in establishing this Industry by helping in the shape of advance on the condition the manufacturers sell at reasonably low prices. (3) When the Indian made things are patronised by the consumers in this country.

103. In 1934, Java landed her sugar in India at unremunerative prices. The fact will be clear from the following statement of prices *ex*-duty of Java sugar c.i.f. Calcutta.

Date.	Price in Indian currency per maund.		
	Rs.	A.	P.
1933—			
January to March	3	12	2
April	3	12	5¾
May	3	10	7
June	3	13	6
July	3	13	0
August and September	3	11	6
October	3	10	6½
November	3	9	1¼
December	3	4	1
1934—			
January	3	1	8
February	3	6	1
March and April 1st to 24th	3	5	1
April 25th to 3rd May	3	3	1½
May 4th to 10th	3	1	9
May 11th to 28th	3	1	3¾
May 29th to 21st June	2	15	4½
July 9th to 16th	2	15	10½
July 17th to 30th	3	0	9¾
July 31st to 9th August	3	0	4
August 10th to 20th	3	1	3¼
August 21st to 26th September	3	0	4
September 27th to 6th October	2	13	4¾
October 7th to 10th	2	12	1
October 11th to 27th	2	13	4¾
October 29th	2	11	6
November 13th	2	9	9
November 14th	2	9	3

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The last Tariff Board considered that under normal conditions the price of Java sugar landed in Calcutta would be Rs. 4 a maund *ex*-duty, but in circumstances of exceptional competition or for special reason, Java manufacturers might go down to as low as Rs. 3-4 per maund. At the time Java was suffering from large accumulated stocks of unsold sugar.

The facts were brought at the time to the notice of the Government of India by a Deputation from the Indian Sugar Mills Association which met the Hon'ble members concerned on 24th November, 1934.

104. Export of Sugar (in tons)—

	By sea. Tons.	By land. Tons.
1930-31	893	40,126
1931-32	226	28,885
1932-33	437	27,729
1933-34	425	33,110
1934-35	363	34,034
1935-36	389	25,836
1936-37 (for ten months up to January, 1937).		

In the opinion of the Association facilities should be offered for exports of Indian sugar to the United Kingdom by admitting it at certificated colonial rates (1*s*. 5·3*d*). Exports will become possible when Indian price *plus* freight *plus* this preferential rate is equal to or lower than the price of non-Indian sugar landed in England after paying the regular custom duty. India at the moment does not make sugar of 96 polarisation as there is no internal demand for it. Indian sugar is about 99 polarisation.

When reasonable facilities are extended by the Railway the Government in freight and duty respectively and also by the shipping agency. Moreover when there are no international trade barriers.

105. " Additional Duty 1937 " has very adversely affected the sugar Industry. If this state of affair continues for a couple of years more, many a factory will come to grief, not surprising when we hear the cry, " Sugar Industry is on the verge of collapse ".

106. No satisfactory arrangements. In fact it has ceased to have any price whatsoever.

107. Exports of Molasses from India—

	1930-31.	1932.	1933.	1934.	1935.	1936.	1937.
Aden and dependencies	13	12	11	13	..	..	..
United Kingdom .	..	..	7	179	153	..	13,622
Ceylon. . .	390	658	707	890	890	925	923
Union of South Africa.	13	12	8	14	..	..	9,500
Zanzibar and Pemba	14	15	17	17	..	..	..
Other possessions .	13	21	13	19	..	..	..
Other Countries .	..	..	..	..	110	101	140
TOTAL .	443	718	764	1,141	1,153	1,415	24,195

108. Yes, to a small extent. It has effected sugar Industry very favourably so much so that before this protection India's total production was 478,119 tons which has now risen to 11·5 lakh tons.

109. The protection should be increased by the amount of increase in Excise duty in March last, upto the period March, 1946 or further if the conditions so demand. To keep the industry in existence the protection still at higher rate is very essential.

110. Factory stations should be interlinked by means of Railway and pucca road with interior of the country. Government should establish one experimental farm for every factory and a small research station for the group of factories. The Government should encourage the development of the subsidiary industries such as manufacture of syrup, biscuits, fruit preservation and canning.

111. The following statement shows molasses produced in India and molasses imported into India in the last six years:—

	Indian production. Tons.	Imports into India. Tons.
1930-31	269,000	102,204
1931-32	365,809	40,191
1932-33	461,658	31,991
1933-34	430,000	2,401
1934-35	406,000	415
1935-36	494,000	*Nil.*

It is the increase of Indian production that affected imports of molasses, and not the duty, no Indian industry has suffered as molasses are available at nominal prices in India itself.

The Nawabganj Sugar Mills Co., Ltd., Gonda.

1. 1933. January.

2. 5,000 maunds sugar per day.

Season.	1st cry.	2nd cry.	3rd cry.	Crushed.	Total.
1932-33	16,518	12,151	2,860	*Nil*	31,529
1933-34	33,688	30,870	41	*Nil*	64,599
1934-35	34,957	25,665	*Nil*	*Nil*	60,602
1935-36	108,902	34,620	*Nil*	30,121	173,463
1936-37	160,027	*Nil*	*Nil*	3,645	163,672

3. (*a*), (*b*) & (*c*) Yes.

4. Double sulphitation process.

Double Carbonitation process is the best process yielding a sugar of much better keeping quality, while yield from juice is slightly higher than in the sulphitation process. The selection of the process is governed chiefly by the cost at factory of limestone, which is the heaviest item of manufacturing cost, as in many factories the cost is prohibitive. Carbonitation sugar commands a higher price than sulphitation.

5. 1933—Additions: One Boiler and One Vacuum Engine.

1934—Replacements: Cane knives and Engine, Two sugar crushing machines.

Addition: One Vacuum pump.

1935—Additional 600 tons plant and equipment was installed.

1936—Addition of 8 42″ centrifugals.

6. As for crop 1937-38 two door clarifiers are being installed to deal with the juice from 50,000 maunds of cane per 24 hours.

Extent of crushing season.

Cost of cane at factory.

Sucrose content of cane.

Factory location in relation to the marketing centres.

(B) Under present conditions with sugar at Rs. 6 per maund, Excise duty Re. 1-8 and cane at 4½ annas per maund, the 10 per cent. yield on cane. 27,000 maunds per day, *i.e.*, with a factory with a crushing capacity of 1,000 tons cane per day.

8. Casting of all types; reshelling of rollers; small pumps, tanks and accessories; steel structural work and other building materials.

9. The Imperial Institute of Sugar Technology has not been of any marked benefit to the industry. It is however, only in its infancy and has functioned for only a small period. Students are trained for positions in sugar factories. There should be much more direct contact between the companies and the Imperial Institute; and practical advice and assistance of the consulting staff should be available for the sugar factories, in order to assist the factories in their particular problems. Only companies controlling a group of factories can maintain a special technical control organisation which can investigate problems in any of the company's factories. A company with one factory can not afford a special technical staff for this purpose and as a rule the technical staff for this purpose and as a rule the technical staff attached to factory have little time to investigate special problems and carry on the routine control at the same time.

The value of a special technical control staff is that detached from routine technical control, they are able to devote their entire attention to particular and special problems and investigations.

This technical service should be afforded by the Imperial Institute to factories in their particular problems, and such assistance should be free or at a cost not more than actual travelling expenses.

10. Yes.

Raw Materials.

The land was taken on lease from the Court of Wards and the difficulties experienced by us are:—

No proper demarkation is ever done and there is always dissension with neighbour. The area is less than the lease and we have to pay nearly 25 per cent. extra. The land is not open into squares or pieces before leasing it out with the result that there is always dispute about the cart-track which must invariably be established and maintained by the leaser. The Patwaries and the Court subordinates give the same piece of land by altering number of fields to two lessees which forms bone of contention and harrassing.

11. (*a*) 1,150 acres.

(*b*) 200 acres.

(*c*) Co. 213 which form the bulk, other varieties under experience are:—Co. 312, 313, 356, 393 and Poj. 2,878.

(*d*) The land is cleared off bushes and laid out. It is then broken with Kudal (a hand hoe) and the clods broken again by a run of Kudal. It is then levelled and left a month before the sowing season, seed bed is prepared with inversion plough and levelled and reduced to fine tillth by cultivator and harrow, and then levelled.

The field is then sown with setts of sugarcane placed longitudinally after a ridger, and planked.

It is harrowed to keep down weeds and intercultured with Kudal in the month of May. Before the break of monsoon, the cane is earthed by throwing earth on both the sides of cane plant. After the rain the cane plants are tied together, two or three stools together in order to stand the wind that blow later and avoid lodging. The sugarcane ripens about the middle of December. When it is cut, stripped and disposed off. The trash is burnt. This is plant crop.

The stumps of cane spring into new shoots again. These are given an interculture and planked and the Farm yard manure broadcasted, another interculture if required is given in May and left until harvesting season when it is cut, stripped and disposed off. This is ratoon crop.

After Ratooning once the stumps of cane are completely removed with Kudal digging and seed bed prepared for the sowing of Sann Hemp which takes place with the start of rain. As soon as the rain is over the crop has sufficient leakage and is turned under by inversion plough. This must take place before the seed formation.

The crop rots and decomposes in the soil and supplies the organic matter and nitrogen to the soil to make up the elements removed by the previous two cane crops.

Summary.—Plant crop; Ratoon crop (Farm yard manure); Fallow (Green manuring done with Sann hemp).

(*e*) Average yield per acre:—

Co. 213 . . . . . . 400 maunds unirrigated.

No observation made on other varieties and irrigated cane crop.

Sucrose contents Co. 213 . . . . . . 12·30 per cent.

12. (*a*) 4 acres under Manurial Experiment.

(*b*) No.

13. Manurial Experiment—

NP mixture supplied by the Overseas Potash Export Co., Calcutta was applied at the rate of 7 maunds per acre to which the crop responded. From grower's point of view it gave no surplus. The extra yield balanced the price. However, the average cane being a better specimen, might be superior in sucrose contents.

Molasses at 300 maunds per acre was tried last year, the stand was superior to untreated plot but no critical observation was made.

As regards late and early maturing varieties an experiment was made under different varieties supplied by the Department of Sugarcane Control in the last year but without a material benefit.

14. There is steady increase in the area under the crop as indicated by figures of sugarcane received at the gate:—

	Mds.	Srs.
1932-33	769,819	0
1933-34	1,615,678	0
1934-35	1,285,055	30
1935-36	2,332,621	20
1936-37	2,547,008	0

(*b*) there is no marked improvement in the quality of the cane.

15. No frost has been so severe as to damage the cane crop in this part of the country. Damage due to diseases and pest is variable since there is no discretion in using good quality seed. In 1934-35 the crop was damaged to the extent of 25 per cent. on account of disease.

16. The gate supply is yet inadequate to meet our requirements as we have to import sufficient quantity from out-stations.

The principal variety of cane crushed in our factory is Co. 213. The yield per acre is 350 to 400 maunds.

The sucrose percentage is 12·30.

17. There is no competition under the present system of Zoning are commanded by in the individual factories.

18. (*a*) Yes.

(*b*) Deficiency in rainfall effects yield adversely.

(i) The delicate plant burnt by the scorching dry summer where irrigation is not applied and may reduce yield to 50 per cent. in severe cases. Excess rain causes errosions and leaching up manurial contents of the soil thus empoverishing surface soil. This accounts for good and bad year for a crop.

(ii) Area under sugarcane is commensurate to price obtainable.

(iii) The Bulk of sugarcane is grown for making sugar and the price of the latter reflects on the sugarcane and low price of sugar reduces area under crop too abruptly where as high price for gur may cause but little increase in the area.

(iv) The High price of alternative Cash crops which keep well, tell adversely on the area put under sugarcane.

19. No.

Because we have to draw cane from outstations by rail to the extent of about sixteen lakhs of maunds, *i.e.*, 38 per cent. of our total quantity crushed.

(ii) We do not consider restrictions admissible at present.

20. Cost of cultivation per acre of sugarcane by an average cultivator—

	Rs.	A.	P.
Preparation of seed bed with Kudal . . .	10	0	0
Planking	1	0	0
Cultivating with desi plough twice . . .	4	0	0
Planking	1	0	0
Sowing, on plain, including preparation of seed	4	0	0
Planking	1	0	0
Interculture with Kudal	4	0	0
Seed	10	0	0
Watch	...		
Land Revenue	2	8	0
Total .	37	8	0

N.B.—His own labour is looking after field and supervision are not included.

21. In this area the chief difficulties are:—

(*a*) Cultivation methods need to be improved.

(*b*) No proper system of fertiliser or manure application is practised.

(*c*) No system of irrigation is adopted, and much of the cane dies between the period after the cane has been germinated and the arrival of monsoon rains.

(*d*) Feeder roads are very bad and the District Board do not maintain them at all where they have their roads. Roads in the interior are impossible when it rains. These being communal are not looked after by anyone. Transportation is a great problem to the growers and factories alike.

Assistance should be extended to cane growers in the form of Modern ploughing outfits and fertilisers. A system of protective irrigation is necessary and the present tubewell scheme started by the United Provinces Government should be extended to the cane growing area. In some cases irrigation may be carried out from country wells but this is inadequate to yield. Generally protective irrigation is necessary for the sugarcane crop.

Education of the cane growers on improved cultivation methods, value of fertilisers, and instructions on cane pests, and diseases, careful proper seed selection are all most essential. System of crop rotation to yield the best results and ratooning under proper condition are all matter of education. The small grower needs help on all these points, and assistance either by finance or in the form of materials and supplies, as few are in the position to finance adequate cultivation methods.

Economic cane production which includes increased yield of cane per acre and cane of high sucrose content is the paramount problem of the agriculture side of to-day. This can be done by the Government Department and in cases where a factory draws all its cane from adjacent areas such work could be taken up to by the Company's agricultural staff.

22. A factory to run economically and obtain highest possible extraction should be able to draw all its requirements from areas adjacent to the factory. Thus the time between cutting and milling is reduced to a minimum; due to long distance cane and efficient control maintained over all cane supplies.

Few factories are in the happy position of either drawing all the necessary cane from adjacent areas or to acquire lands at a reasonable cost for cane cultivation. Due to the extension of the sugar industry land values have been considerably increased and at present values few factories can afford to buy land for cane cultivation within a reasonable distance from the factory. If it were possible to lease land at a reasonable outlay a factory should aim at producing at least 50 per cent. of its requirements by direct cultivation and 50 per cent. by tenant growers. Economic cane production is possible only in lands in large blocks where modern mechanical tillage can be carried out and protective irrigation applied.

Where factories are prepared to start cane cultivation this will not be possible under present conditions as only under a scheme of Government control of land or Government leasing of land, will this important aspect of the industry be possible.

We feel that there should be a Government scheme of leasing or acquiring land and is a matter of careful consideration.

22. (*b*) We are in favour of allotting special areas to different factories for supply of cane, where a factory is so placed as to be able to draw all its requirements from a reasonable distance from the factory, it would be allowed to do so. Where this is not possible a factory should be allowed to draw its full supplies from the nearest area.

It is only by a system of allotting areas of zones that unnecessary transport costs can be avoided.

For instance in an area where beyond the "Home station" say the next station may send lakhs of maunds of cane upto 50 miles distance. This cane should be split up between the nearest factories.

In certain areas of United Provinces and Bihar there is definitely ill advised congestion of mills with large cane crushing capacity. One consequence of this congestion has been that every season a severe competition ensues amongst the mills for obtaining cane supplies which in turn results in unnecessary cost of collection (Indian Sugar Journal 1936).

There exists to-day muih Criss-crossing of transport which is most uneconomic. The Zone system could be started on the following basis:—

Each party to estimate the available cane in its own area upto 8 miles from the factory. The excess of cane beyond the factory requirement to be available to factories in the adjacent areas.

Shortage of cane in this area to be made up from outside nearest areas.

In areas where no factory is near the radius of 8 miles to be extended.

A committee with full powers to be in-charge of "Zone" allotments as unsuccessful attempts have been made to formulate a system of "Zones" and "Home Stations" in order to eliminate and minimise competition.

23. If the Zone system were introduced, we would be prepared to assist cultivators, in the form of advances of seed, fertilisers and implements. It is suggested that if a summary process were provided for recovery system would be facilitated.

The development of feeder roads is the legitimate function of local boards.

The agriculture department of the factory could also advise the growers and give advice when required. It is only by such a system that co-operation between the grower and the factory can be strengthened. At present there is no guarantee that any assistance given to the local cane growers will be of direct benefit to the factory concerned, as there is no guarantee that the cane will not be attracted by other factories. The Zone system relating to this aspect of the Industry would gradually tend not only to improve the yield and the quality of the cane but be most beneficial to both grower and manufacturer. Organisation of cane supplies would be much easier and simpler and more satisfactory to the grower and manufacturer. There is no reason why this system would not be a success and in cases where the factories are not the finance and the agricultural experience to start cane cultivation on a large scale the " Zone " system is the only other alternative.

24. (*a*) We are not in favour of a quota for sugar manufacturers by factories, we do not feel that a quota system is permissible where new factories are still being erected.

(*b*) (i) We are in favour of licensing of new factories as the number of factories at present is adequate to supply the needs of the country.

(ii) Licensing of extensions of existing factories is a question connected with centralization. The trend of the industry is towards increased output in order to reduce cost of production. Increased output means centralization with the elimination of the smaller factories. We therefore, suggest that the licensing of extensions of existing factories is necessary. The Licensing should be entrusted to an All-India Body.

25. Season.	Gate Cane. Per cent.	Rail Cane. Per cent.	Tram Cane. Per cent.
1932-33 . . .	89·95	10·05	*Nil.*
1933-34 . . .	90·02	9·98	*Nil.*
1934-35 . . .	79·49	20·51	*Nil.*
1935-36* . . .	47·59	52·41	*Nil.*
1936-37 . . .	61·69	38·31	*Nil.*

26. Yes.

Our gate cane is entirely transported by carts. On the average a cart load weighs 17 maunds.

Rubber tyred carts cannot replace the country carts due to their higher price than a cultivator can bear but better technique in the making of wheels to reduce per sq. inch and also to lessen friction will improve the present model. We are using Dunlop rubber tyred carts and a same pair of bullocks which carries 16 maunds can carry 30 maunds conveniently on Katcha track.

27. Mileage of all the main roads is adequate but feeder roads in the interior require more extension and better condition of repair and maintenance.

The condition of *Gonda-Basti Road* which is a provincial road is good. Carts come from further off places and bring sufficient load. Due to this very facility cultivators grow much more cane than Tarabganj and Tikri side where roads are maintained by the District Board and are in rotten condition. The condition of these two District Board roads (Tikri and Tarabganj) is miserably bad and unfit for bullock cart traffic. Ruts are so deep at portions that half the portion of wheel runs into it.

28. *Gonda-Basti Road* (*Provincial road*) :—Cane within the radius of 18 miles generally comes to our factory. The condition of the road is good and at times carts come from a distance of 20 to 23 miles.

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* The Plant was duplicated and more rail cane was demanded from out-stations.

Twenty hours is the average time cultivators take between cutting cane and its delivery at the factory.

Tarabganj and Tikri side roads:—The condition of the (District Board) roads is bad hence cane in the radius of eleven miles come to the factory. It takes about 27/30 hours average in cutting cane and its delivery at the factory.

29. The average cost of transport of cane by carts coming from Gonda-Basti side is pie 1 per maund per mile and carts coming by Tikri and Tarabganj road pay pie 1·7 per maund per mile.

Cultivators are generally poor and cannot afford to keep bullocks and incur expenses to keeping the carts. Another class has developed which do the transport business. Only a few Zemindars have got their own carts. Cartmen who ply their own carts on hire charge from Anna 1 per maund to As. 1-6 per maund for taking the sugarcane from fields to the factory.

30. Our factory imports about 3 lakhs maunds of sugarcane from Ajodhia side and Fyzabad side (the other side of the Ghagra River). Bengal and North-Western Railway builds every year a pontoon bridge over it. For every loaded cart they charge As. 6 per cart and As. 3 per cart for empty cart. Carts coming to the mills pay for both ways, *i.e.*, As. 9 per cart as toll-duty. It is an extra burden on the cultivators. As. 1-3 to As. 1-9 per maund they pay for the transport and As. 9 as ferry charges.

31. We have not got any special arrangements for the continuous and uniform supply of gate cane. The normal period of detention of carts at our gate is 16 hours. We have opened more weighbridges at the gate to ensure prompt delivery of cane and speedy release of carts.

32. We import Rail cane from stations situated at a distance of 14 to 53 miles. The average time taken between cutting of cane and its delivery is 24 to 40 hours. The railway arrangements for transport of cane are not so adequate. Much difficulty is experienced in securing Railway wagons when all the factories start importing cane from outstations.

33. The Railway freights are calculated on the basis of mileage. There has been no change in recent years except in the year 1936-37 when the freight was reduced towards the end of April by 25 per cent. from stations situated at a distance of more than 50 miles from the factory. The rates are preferred to substitution of maundage rate per mile.

34. The Railway freights for other raw materials such as Coal, firewood, lime, manure, sulphur, etc., are not economical.

35. No.

36. Yes, there are many impediments in the way of introducing tramway system as the condition of roads is very bad and the acquisition of private land is a great problem. The present uncertain condition of sugar industry does not permit of such a big investment of laying tramway.

37. The rate of dryage varies with different varieties of cane. The average rate of dryage and resultant loss in available sugar is directly proportional to the duration of time.

Period of transit of sugar cane.	Available sugar loss.	Dryage.
	Per cent.	per cent.
Fresh sugarcane	*Nil*	*Nil.*
After 24 hours	3·5	3·76
,, 48 hours	12·8	6·59
,, 72 hours	25·6	8·93

38. The proportion of cane we purchase—

Direct from growers	61·69 per cent.
Through Agents	38·31 ,,

39. *Nil.*

40. We purchase cane direct from the growers at the gate except 6·5 per cent. of the gate supply was purchased in the year 1936-37 through the Cane Development Co-operative Society.

Co-operative Society. Pies 3 per maund as commission is demanded.

41. *Nil.*

42. We have got seven weighbridges fixed for weighment of cane at the gate. The payment is promptly made after delivery of the cane except during night hours.

43. Seasons.	Average per maund. A. P.
1932-33	5 7·49
1933-34	5 0·38
1934-35	5 6·58
1935-36	5 10·4
1936-37	4 9·64

43. The prices of sugarcane are governed by the Sugarcane Rules, 1934, and accordingly the prices are paid.

44. The prices of sugarcane is fixed by the Government according to the United Provinces Sugarcane Rules promulgated in the year 1934.

45. The price of Gur/Jaggery for Khandsari sugar does not influence the price of the cane in this area.

46. Since the factory operated there has been considerable fall in the production of gur and the present prevailing prices of gur do not pay the cultivators to make to the manufacture of gur, because there is not much demand for it.

47. Yes.

We have been paying prices in excess of the minimum rate fixed by the Government as sugar selling at much higher prices.

48. We do not consider the basis on which minimum prices are fixed to be satisfactory.

The basis does not take into account the quality of the cane. All cane irrespective of sucrose content and available sugar is paid for on the same basis. This under certain circumstance is a definite handicap. The rate operates at all the loading stations, which is the same for the home station, all transport costs from out-stations are additional and paid by the factory. The minimum rate for rail borne cane should be much lower than the gatecane.

In the average factory drawn cane from hundreds of suppliers daily individual tests are impracticable but the position could be met.

When some tests showed cane of poor sucrose content or old cane factory be given power to base price on the analysis.

It must also be noted that the formula for minimum price of cane is based on Cawnpore Market prices does not take into consideration the heavy Excise duty of Re. 1-8 per maund. None of this is passed on the cane supplier and is entirely borne by the factory. We suggest that part should be borne by the supplier.

49. We do not consider it feasible to introduce a system of "bonus" payments over and above the minimum rates for early and late ripening varieties.

50. Duration of seasons—

1932-33	1st January to 15th May, 1933.
1933-34	8th November to 21st April, 1934.
1934-35	28th November to 23rd March, 1935.
1935-36	17th November to 6th May, 1936.
1936-37	2nd December to 25th April, 1937.

(*b*) No. The duration of present working season is not economical unless some early and late varieties are introduced which mature in the beginning of November and as late as April.

51. The duration of season can be extended by the introduction of early and late varieties of sugarcane.

52. The Agriculture and Co-operative Departments have been of no assistance to the factories. They do not inspect the fields of ryots to check out diseases, or help them in getting good seed at easy terms, or advancing loan to help the cultivation of sugarcane. It would be better if they pay attention to these matters.

Labour.

53. Crushing Season—

Skilled labour	172
Unskilled labour	1,133

Silent Season—

Skilled labour	116
Unskilled labour	299

54. We have got our Superintending Engineer and Superintending Chemist from abroad.

We get skilled labour from all parts of India.

55. *Nil.*

56. Adequate arrangements for housing the labour have been made on the premises. There is a free Hospital provided for the labour. They are allowed all other amenity of life, free fuel, water, light and medicines, etc.

Power.

57. So far we have found it necessary to supplement bagasse by coal and wood.

Bye-products.

58. No.

59. Outturn and prices of Molasses—

Season.	Quantity of Molasses.	Price of Molasses.		
	Maunds.	Rs.	A.	P.
1931-32	*Nil.*	*Nil.*		
1932-33	25,674	2,716	5	3
1933-34	71,000	2,163	12	3
1934-35	56,255	1,948	4	9
1935-36	196,057	22,277	13	9
1936-37	123,951	5,536	13	6

(Estimate price as per contracts.)

1935-36.—Owing to demand by the Indian Molasses Company, Calcutta and local market we have been able to dispose off the molasses.

60. Local and Calcutta side.

The Molasses is transported by rail in Molasses Tank wagons to Sonepur, Semariaghat and Barauni junction, wherefrom this is transhipped by steamer. The freight for the factory station to the booking stations is As. 1-10·3, As. 3-8 and As. 3-8 per maund, respectively. Railway facilities are inadequate as the tank wagons are reserved for the Indian Molasses Co.

61. We are convinced that the solution of the Molasses problem is the production of Power Alcohol.

Molasses at present, is a waste product (though potentially a valuable asset to the Industry) and is a heavy loss to the Industry. The tariff Board valued Molasses at Rs. 1-8 per maund and to-day the price on the average does not cover cost of handling charges.

The production of Power Alcohol presents no technical problems. Power Alcohol Industry, has been studied and brought to a success in many countries.

There are successful and efficient Distilleries operating in India to-day and while we believe none are at present producing power alcohol (with the exception of the Mysore Distillery) with little alteration they could easily do so.

We, therefore, do not consider it necessary for Government to start any " Experimental Distillery Plant " for production of Power alcohol, or experiment with power alcohol as a fuel.

The problem is not one of production, it is a problem of marketing as in India marketing of like fuel is the monopoly of the powerful Petrol combines. Power alcohol is produced in many countries.

In Germany " Monopolin " is a mixture containing 20 per cent. absolute alcohol. In Sweeden " Lattbentyl " is a mixture containing 25 per cent. absolute alcohol and 70 per cent. of Petrol which is used almost exclusively in that country.

In Australia " Shellkol " is a mixture containing 15 per cent. Absolute Alcohol and 85 per cent. Petrol. In South Africa a mixture of 50 per cent. Absolute Alcohol and 50 per cent. Petrol is marketed. It is stated that consumption in these countries is annually increasing, proving beyond doubt that mixture of Absolute Alcohol and Petrol are efficient mixtures for use in internal combustion engines.

We suggest that the problem of production and marketing of power Alcohol should be approached not from the aspect of a competitor of petrol or to replace petrol, which would encounter severe competition and opposition from the power petrol combines but as a means of improving the quality of the petrol mixture to the advantage of users (the public) and finding a market for valuable waste product, molasses, as power alcohol. The advantages of alcohol Petrol mixture have been proved and no further comment is necessary.

The problem of marketing:—Marketing arrangements could be mutually arranged between power alcohol producers and the petrol concern. This is one of the most important problem of the sugar industry and can only be brought to a successful issue by the intervention and sanction of Government. Government has fostered the sugar industry by imposing a tariff on imported sugar, raises revenue by excise duty on sugar produced in the country protects the cane grower by regulating cane prices. So why should Government not further assist the industry by sanctioning the production of power alcohol and convert a waste product into a valuable commodity. No revenue would be lost by Government as alcohol petrol mixture could be assessed as petrol is to-day.

Production of power alcohol would be under Excise control.

India as a market for such spirit is steadily increasing one—and the Industry can be assured of a steady increased demand for power alcohol. This proposal would mean the erection of central distillery suitably located throughout the sugar areas. It would not be necessary for every factory to have its own distillery. Central Distilleries would be supplied with molasses from adjacent factories and suppliers would have a financial interest in the Central distillery.

We strongly urge that the Tariff Board will give this matter their full and sympathetic consideration.

62. No.

63. Utilization of filter press cake as fertilizer.

64. Storage and Transportation of Sugar—

Season.	At beginning.	At the end.
	Bags.	Bags.
1932-33	*Nil*	31,529
1933-34	*Nil*	64,599
1934-35	*Nil*	60,602
1935-36	28	173,643
1936-37	32,350	185,762

65. We have six godowns for storage of sugar erected as follows:—

2 Godowns 100 ft. × 50 ft. × 18½ ft. erected in 1932.
1 ,, 150 ,, × 50 ,, × 21¾ ,, ,, ,, 1934.
1 ,, 150 ,, × 60 ,, × 21¾ ,, ,, ,, 1935.
1 ,, 93 ,, × 70 ,, × 21½ ,, ,, ,, 1936.
1 ,, 91½ ,, × 70 ,, × 21½ ,, ,, ,, 1936.

Total capacity of storage: 120,000 bags.

66. This year there have been no signs of deterioration of season 1936-37 sugars.

Deterioration of sugar is usually due to:

(1) Poor quality of sugar manufactured and

(2) Dampness in sugar godowns.

These points are given attention in this factory.

67. Damaged sugar is usually remelted and reconditioned.

68. The keeping quality of sugar can be improved primarily by producing an entirely pure sugar, free from any traces of molasses. Such a sugar stored under proper godown conditions will not deteriorate.

69. During the rainy season the sugar is damaged in transit on account of leakages in sugar wagons and due to atmospheric conditions and transportation of goods at the terminal stations. The percentage of damaged sugar is approximately 1 per cent.

70. Yes, a considerable difficulty is being experienced, for not regularly getting the wagons for booking of sugar as during the crushing season there is a huge traffic of cane and other goods and the Railway has not got sufficient number of wagons to meet the demand.

71. The wagons may be made rain proof.

72. (*a*) *Nil.*

	Per maund.		
	Rs.	A.	P.
(*b*) 1932-33	9	2	6
(*c*) 1933-34	7	12	6
1934-35	8	3	3
1935-36	7	7	1½
1936-37	6	2	3

The freight rates are as under—

	Per maund. Rs.	A.	P.
Cawnpore	0	5	2
Lucknow City	0	3	3
Gurshaiganj	0	8	3
Bhavanagar Terminus	1	7	2
Belonganj	0	10	8
Khandwa	1	5	10
Madhonager Freeganj siding	1	4	10
Allahabad	0	8	3
and	0	6	6
Indore	1	5	10
Wadi Bunder	1	1	0
Ahmedabad	1	7	7
Surat	1	7	7
Karachi City	1	0	0
Elgin Club	0	12	8

Capital Account and Overhead Charges.

73. The Balance Sheets for the year 1932-33, 1933-34, 1934-35, 1935-36 and 1931-32 are attached herewith.

74. Depreciation:—

Season 1932-33—

	Rs.	A.	P.
Machinery	22,853	6	9
Tools and Plants	1,243	10	0
Weighing machines	479	0	0
Building	4,273	8	9
Railway siding	577	2	0
Safe fixture	268	1	0
Books	10	3	0
Live stocks	100	8	0
Total	29,805	7	6

According to the Statuary rates except on live stock, Laboratory apparatus, Books and Sports, etc.

Season 1933-34—

	Rs.	A.	P.
Machinery	69,715	7	8
Tools and Plants	1,621	3	0
Weighing Machines	1,200	0	9
Building	5,089	8	9
Agriculture Implements	56	11	6
Railway Siding	1,254	15	3
Safe Fixture	631	11	6
Books	20	8	0
Live Stock	60	4	9
Sports	96	0	0
Total	79,746	7	2

Season 1934-35—

	Rs.	A.	P.
Machinery	65,923	11	0
Building	5,273	12	0
Weighing Machines	1,207	15	6
Tools and Plants	1,770	2	0
Railway Siding	1,261	11	6
Safe Fixture	800	9	9
Books	24	3	3
Agriculture Implements	120	5	0
Live Stock	85	2	3
Laboratory Apparatus	387	12	0
Telephone	50	8	0
Total .	76,905	13	0

Season 1935-36—

	Rs.	A.	P.
Machinery	1,33,050	7	0
Building	6,078	13	0
Fencing	72	7	0
Building at Farm	46	5	9
Weighing Machines	1,573	11	6
Tools and Plants	2,081	2	0
Railway Siding	1,359	6	3
Safe Fixtures	1,015	5	0
Books	26	14	6
Agriculture Implements	217	7	6
Live Stocks	299	13	9
Laboratory Apparatus	617	0	9
Total .	1,48,529	4	0

75. Reserve funds set aside—

Season.	Rs.	A.	P.
1932-33	19,800	0	0
1933-34	80,200	0	0
1934-35	40,000	0	0
1935-36	1,80,000	0	0

76. Actual amount distributed as dividend—

Season.	Rs.	A.	P.
1931-32	*Nil.*		
1932-33	37,323	6	8
1933-34	1,07,621	4	0
1934-35	1,09,898	5	0
1935-36	1,43,650	6	0

77. The funds are borrowed from the Bank against sugar stock and the rate of interest is 3½ per cent.

78. Annual amount of Head Office expenses are as under:—

Season.	Rs.	A.	P.
1931-32	4,535	7	3
1932-33	77,449	0	4
1933-34	60,010	2	0
1934-35	29,491	11	8
1935-36	50,448	5	3

Commission of the agents (Managing):—

Season.	Rs.	A.	P.
1931-32	4,096	11	6
1932-33	7,690	4	9
1933-34	6,936	9	9
1934-35	11,196	10	3

The managing Agents are paid an honorarium of Rs. 250 per mensem and 2½ per cent. commission on the net profits of the Company after allowing for depreciation, Income-tax, etc.

79. 10 per cent. is a fair dividend on the block capital.

80. The form* duly completed is enclosed herewith.

81. Separate statement is enclosed herewith.

82. There is a possibility of slight increase in recovery to 10·25 per cent. and this will show corresponding decrease in the cost.

83. Marketing—

The principal sugar marketing centres are:

United Provinces:—Cawnpore, Lucknow City, Allahabad.

Gwalior State:—Elgin Club.

Bombay:—Wadi Bunder.

Indore:—Indore Proper.

84. Usual arrangements in the sale of sugar are carried out through the selling agents. After the bargains are made sales are accepted and confirmed goods are delivered against challans. In some cases the earnest money is also demanded.

(*b*) Through Brokers.

Not acquainted with further details.

85. Yes.

No.

86. We are unable to adequately answer this question.

(*b*) No critical observation has been made.

The difference in price between the wholesale and retail sales is reported to be Re. 1 to 1-4 per maund so it is not likely to fluctuate the prices widely.

88. Ordinary godowning arrangements.

No knowledge about the deterioration.

89. Inferior Indian sugar deteriorates more rapidly than Java and other imported sugar, but some Indian sugar are equal to Java standards.

There has been a definite improvement in the keeping quality of many Indian sugars during the last two years.

90. Java sugar is preferred in Hotels and Restaurants run on the European style for their customers. But even high grade Indian sugars are replacing Java sugar. To a very small extent in the preparation of

---

* Not printed.

some special Indian sweets where customers like a bright white colour Java sugar is used.

91. The present quality Indian sugar generally is not equal to Java standard. Indian sugar is inferior generally in colour, regularity and size of grain. Some factories, however, produce sugar equal in all respects to Java sugar.

92. (*a*) Sugar stored in the Mills' Godowns 66 per cent. of the total manufactured.

(*b*) Our dealers do not carry stocks.

The bank finances it against stock and it is supervised by Bank's clerk.

93. Yes.

94. We favour a Central all-Indian selling organization.

95. Yes, the standard may be based on quality, grain and lustre.

It is an essential preliminary to the operation of a Central control sales control organization. Experience was not available when standards were tentatively suggested and factories were unable to adopt them. They had therefore to do business on the basis of individual samples.

96. (*a*) & (*b*) No.

97 & 98. No.

99. The estimated consumption normal consumption of sugar is roughly 1,000,000 tons.

Consumption is subject to general economic conditions in the country.

100. Factory sugar is almost entirely replacing gur in the sweetmeat trade.

101. The starting of subsidiary industries, sweets, syrup, fruit preservation and canning is chiefly a question of location at Capital.

102. No available data.

103. We believe Java sugar was landed in India, in 1934 at the low price of Rs. 2-6-1 per maund (Indian Sugar Industry Annual 1936).

104. (*a*) Indian sugar is exported to Burma.

(*b*) Indian factories suitably placed near seaports could export sugar if Excise Duty is not levied on such sugar. In most cases, however, freight to seaports would be a heavy for export sugar *plus* cost of freight to foreign market. Also if Indian sugar is given the Imperial preference in British markets.

105. The Excise Duty in 1934 effected the financial position of many Companies, before the industry was established on a firm footing. The Industry was in its infancy; many concerns had not functioned long enough to build up sufficient reserves or put more finance into the factory for improvements and extensions, or cane cultivation. In 1935-36 sugar prices and crop were good and the effect was not so marked as in the previous year.

(11) The additional excise duty in 1937 has placed on the industry a heavy tax which it is unable to bear; few factories will be able to show profits on the working of season 1936-37. The tax was increased when price of sugar was at the lowest level and the full tax is being borne entirely by the manufacturers.

106. We sell molasses to the Indian Molasses Co., Ltd., Calcutta, by sending sample and the price is determined on the basis of brix, and a part is sold locally through brokers on the same basis.

107. European Countries. No.

108. The protection has made it possible for India in a few years to build up a national industry, secondary to cotton in its importance and

stability; making India self-supporting for its sugar requirements; employing over 200,000 men in its 140 factories; adding substantially to the cultivators income, affording him a steady market for his cane at remunerative return on his labour. In addition 2,000 graduates and scientific men, about 10,000 other educated staff are employed in the Industry.

109. We consider it necessary to continue the preference until the Industry has reached a state of stability and Companies have had time to fully develop the agricultural side of the Industry.

110. In view of the position of the Industry to-day some relief from the present Excise Duty is essential.

(i) That the Excise Duty be reduced to half.

(ii) If this is not possible, that half the Excise be paid by the manufacturer and half by the cane supplier.

(iii) That, the additional Excise duty imposed in 1937 should be refunded to the Companies as a definite hardship has resulted therefrom.

(iv) That statutary recognition of the sugar Association be granted by Government.

111. The following statement shows molasses produced in India and molasses imported into India in last six years.

	Indian production.	Imported in India.
	Tons.	Tons.
1930-31	269,000	102,204
1931-32	365,809	40,191
1932-33	461,658	31,991
1933-34	430,000	2,401
1934-35	406,000	415
1935-36	494,000	*Nil.*

It is the increase of Indian production which affected imports of molasses and not the duty. No Indian Industry has suffered as molasses are available at nominal prices in India.

Balrampur Sugar Co., Ltd., Gonda.

REPLIES TO TARIFF BOARD GENERAL QUESTIONNAIRE, 1937.

Production of Sugar.

1. The factory started manufacturing on 20th November, 1933. The full capacity is 750 tons cane per day.

2.

Season.	Total Maunds Sugar.	No. 1 Sugar.	No. 2 Sugar.
		Mds.	Mds.
1933-34 . . .	206,743	163,554	43,189
1934-35 . . .	200,542	200,542	...
1935-36 . . .	261,669	261,669	...
1936-37 . . .	251,287	251,287	...

3. (*a*) The factory is advantageously situated as regards cane supplies, but not of the best quality cane as compared with the Bombay Presidency and the Deccan, but with regard to Limestone the freight is very high amounting to approximately seven times the value of the stone. The same applies to coal and other stores but to a lesser degree.

(*b*) Rail, road and other communications are satisfactory.

(c) Labour is adequate.

4. *Double Sulphitation.*—Lower capital cost, lower operative cost, more careful control required (less "foolproof") lower grade of sugar produced which is more susceptible to damage in unfavourable climatic conditions, lower yield varying from 2 per cent. with high purity juices to 4 per cent. with low purity juices.

Carbonitation.—Higher capital cost, higher operative cost, easier control (more "foolproof") superior sugar made, less liable to deterioration in the monsoon. Higher yield, from 2 per cent. to 4 per cent. dependent on purity of juices.

The additional capital cost for a factory milling 25,000 maunds per day is about £3,500 e.r.w. The critical factor in deciding the process is cost of limestone as laid down at factory; operative costs are essentially those of stone and coke as against lime and sulphur.

Labour difference is unsubstantial.

5. *Additional Plant*—

	Rs.	A.	P.	Rs.	A.	P.
1934.						
Additional Sugar Godown	17,855	15	9			
Hyflo Supercel Plant	407	10	6			
Sugar House Extension	1,588	9	4			
2 Additional Filter Presses	5,604	0	3			
Scum Tank and Pump	1,480	9	2			
Brooks Molasses Furnace	6,554	6	9			
2 Sugar Melting Tanks	1,784	1	0			
Sugar Dryer	8,913	10	6			
2 Syrup Sulphuring Tanks	3,961	7	0			
Seeding Mixer and Elevator	3,709	1	6			
2 New Centrifugals	7,676	13	0			
				59,536	4	9
1935.						
2 Filter Presses and Extension to building for same	14,429	6	10			
1 B. & N. Boiler complete with furnaces	45,004	6	3			
1 175 K. W. Set with transformer cable and switchgear	29,598	11	7			
				89,032	8	8
1936.						
Additional Godown for stores	699	13	1			
Cane Loading Ramp	1,607	15	0			
Cane Road (under construction) Estimated	4,000	0	0			
10 Extra Mundas	2,919	8	0			
Sugar Grader	2,714	14	9			
				11,942	2	10
GRAND TOTAL				1,60,511	0	3

6. With conditions as they are at present we do not contemplate extensions, but should there be an improvement, we may consider installing an additional 3 mill roller and an additional pan, which were provided for in the original design. Extensions to the present centrifugal batteries will also be necessary.

7. (*a*) The main factors which determine the size of the factory are the amounts of cane available for milling and the transport facilities.

(*b*) The capacity of the factory should not be less than 400 tons per day.

8. The most of the equipment in sugar factories can now be obtained in India, but non-ferrous metals and tubes, heavy shafts for rollers, etc., boilers and special pumps and engines have to be imported.

9. (1) Our Managing Agents have a well qualified Technical Staff and have had no need to call on the Imperial Institute of Sugar Technology for assistance.

(2) The cane rate is not received early enough at the factory. The rate should reach the factory 2 days ahead of enforcement date.

10. No. This does not apply to this factory which was erected under arrangements with the Balrampur Estate on their land and cane supplies are taken from their tenants.

11. *Nil.*

12. (*a*) Experiments are carried out in the Balrampur Raj Estate's own farms under their direct supervision.

(*b*) Seed is grown and supplied after selection by the above farms for distribution to tenants.

13. Experiments have been made with various types of early and late varieties of cane and manuring by the Balrampur Raj Estate farms. The early varieties Co. 290, Co. 281 and Co. 299 have been tried—the first two varieties have proved good in sucrose and yield, but are too soft for this area which has forests on nearly all sides. Co. 331 as a late variety has been tried but owing to its similarity in colour to Co. 213 it has been decided to stop its production.

14. (*a*) The quantities of cane available in this area for the last 4 years were as follows:—

Crushing Season.	Maunds.
1933-34	2,123,881
1934-35	1,966,794
1935-36	2,692,664
1936-37	2,495,772

(*b*) The quality of the cane has been subject to seasonal variation *vide* reply to Question No. 80, Form III.

15. We very seldom have damage from frost but from disease and insect pests the damage is very considerable. During the month of February this season a detailed survey was carried out to determine to what extent the cane was infested with disease and this worked out to 24·3 per cent. on the average causing a sugar loss of 3,882 maunds for the month or Rs. 23,292 monthly.

16. No—it cannot be said that this factory is assured of a sufficient supply of cane due to many factors one of which is competition from other factories. The main variety crushed is Co. 213 followed by Co. 313, Co. 312, Co. 281 and Co. 290 in smaller quantities. The Balrampur Raj Estate's farm fields yields are as follows:—

Variety.	Yield per acre Maunds.	Sucrose.
Co 213	833	12·00
Co. 281	800	15·28
Co. 290	706	14·39
Co. 312	816	13·84
Co. 313	806	14·80

17. Competition is a marked factor at certain supplying centres of this factory particularly on the main line. Normally there are eight other factories' weighbridges in addition to this factory's at each main line station from where supplies are drawn.

The proportion of supplies affected by competition is as follows:—

Crushing Season.	Percentage.
1933-34	25·85
1934-35	32·79
1935-36	23·17
1936-37	19·46

18. (*a*) Yes.

(*b*) The area is new to cane growing and due to rise and fall in the cane rates, growers have not been able to satisfy themselves as to the value of a cane crop.

- (i) This area is subject to floods, and short rainfall in the non-irrigated areas damage the crop.
- (ii) Has effect on the area planted.
- (iii) Slight effect.
- (iv) Combined with a low cane rate this year and the increase of cereals, a fall in the cane acreage is expected.

19. No—it is not in excess to requirements.

20.

	Rs.	A.
Preparation	2	8
F. Y. M.	17	8
Planting—		
Seed	9	3
Plough	1	2
Labour	0	14
Hoeing 6 times	4	2
Rent	5	4
	40	9

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21. (*a*) There are not sufficient carts in this area.

(*b*) Cartage rates are too high.

(*c*) Tolls on bridges are too high.

As regards (*a*) carts are gradually being made and (*b*) this is the result of (*a*) whereby professional carters have come from other districts and have made their own rates—it will gradually improve when more suppliers have their own carts. (*c*) Toll rates should be considerably lowered on cane traffic. To ensure better control of cane deliveries at railway stations and factories, the system of issuing passes for carts which we employ should be made compulsory. This by reducing the time carts are kept waiting would reduce transport charges where ryots employ professional carters for the carriage of their cane and save sugar losses due to stale cane. We also suggest that carts should be licensed.

22. Not practicable in this area.

(*a*) As most of the land belongs to the Balrampur Estate with whom the factory co-operates.

(*b*) We have insistently advocated the introduction of a system of "zones" for sugar factories. If this had formed a part of the legislation which was introduced at the time Government decided to grant protection to the sugar industry many of the difficulties with which the manufacturing side of the industry is now confronted would never have arisen. We fear that in some areas it is now too late for any effective legislative action to be taken, but there do exist areas where conditions make it possible for groups of factories to come to a mutual agreement for the equitable distribution of local supplies of cane, and in this Government might be of assistance in an advisory capacity.

23. Our policy is, and has always been, to do everything possible to develop local supplies of cane, by means of loans in cash at reasonable rates of interest—the supply of sound seed, manures and the provision of rubber-tyred carts on the hire-purchase system. It will be naturally realised, however, that if a factory's local supplies of cane are liable to be taken by outside factories, there is obviously less encouragement to the home factory to undertake development measures.

24. We are in favour of the regulation of sugar production by means of quotas, and also the licensing of new factories, including extensions to those at present in existence. Until there is a definite and material increase in domestic consumption, India's production of sugar may now be accepted as having reached saturation point, and to avoid the evils of over-production we consider that Government should at once take powers to limit the quantity of sugar which may be manufactured under a system of quotas. This remedy will not, however, be of any avail unless, linked thereto, the establishment of additional factories is prohibited and any extensions to the plant of existing factories, except for the purpose of increasing efficiency or improving the quality of the product. This question becomes highly complicated by the position of Indian States towards the erection of their own factories and the export of sugar thus made into British India with possible non-reciprocity, but even if a satisfactory solution to this difficulty cannot in all cases be found, our opinion remains unaltered, that the regulation of sugar production in British India in the manner suggested is essential to the well-being of the Industry and to the many interests dependent upon it. In this connection, we would emphasize the necessity of a decision being reached, if possible, before the end of the current year so that the cane planting programme during the ensuing winter can be worked out in relation to the sugar requirements of the country for the Crushing Season of 1938-39.

	Season.	Gate Cane. Per cent.	Rail Cane. Per cent.
25.	1933-34	11·73	88·27
	1934-35	8·92	91·08
	1935-36	18·37	81·63
	1936-37	43·06	56·94

26. By carts only. Average per cart is 25 maunds.

Dunlop carts have been working since last season for transporting cane purchased from a long distance centre—the average per Dunlop cart was 45 maunds.

The small growers can never purchase these carts owing to their high price and would not consider them even on the Hire Purchase System.

Larger growers are slowly considering them.

27. Yes. Feeder roads cannot be called good, as there are many nullahs to cross, main roads on the whole are good, but those maintained by the Balrampur Estate north of the river Rapti are for motor traffic only and the cane carts have to use the cart liks which in many cases are in bad condition.

28. Distances vary between 3—15 miles. The average time between cutting and delivery is 24 hours.

30. There are tolls on bridges over the rivers, see paragraph 21. The rates are As. 3 for loaded and As. 1-6 for empty carts.

31. The purji or ticket system for a definite number of carts daily to the gate. Normally no cart is detained longer than 2—3 hours. The efficiency of weighment clerks has improved in speed of weighing and making out receipts—special cart lanes have been made for the rapid handling of traffic.

32. Varying distances of 12 to 34 miles. Average time between cutting and delivery at the factory is 48 hours. Railway arrangements for the transport of cane are on the whole good, but improvements could be made in (1) siding accommodation at stations and (2) a more adequate supply of cane wagons.

33. There is a scale of charges for each type of wagon per mile with a minimum rate per type of wagon and same is given herewith:—

Type of Wagon.	Rate per Mile.	Minimum rate per type of wagon.
	As. P.	Rs.
Open cane wagons 6, 8 and 10 tons 14 ft.	2 6	5
Open cane wagons 10 tons 16 ft. and 11 tons 15 ft.	4 3	7
Cage trucks 10 tons	4 3	7
Cage trucks 12 tons	4 9	8
Covered wagons	3 6	6

These rates have been in force for several years now and are higher than they were eight years ago but the present flat rate basis is preferable to a maundage basis as cane being a bulky article does not fill wagons to their axle carrying capacity, and to introduce a maundage rate would, we feel, inevitably increase the freight costs as the Railway would calculate the contents of a wagon on the carrying capacity rather than its actual load, which is considerably less.

34. See Question 3-A.

35. There are no tramways.

36. Yes, we consider that a tramway system would be advantageous.

37. The loss through dryage and deterioration between cutting and milling varies according to the variety of cane but the loss is definitely serious in the months of March, April and May. The results of numerous tests carried out during these months in Season 1932-33 indicated that the loss in weight through dryage amounted to 2·5 per cent. after 24 hours, 5 per cent. after 48 hours and 7 per cent. after 72 hours. Apart from the loss in weight, the purity of the juice in the cane deteriorated by one unit after 24 hours, five units after 48 hours and nine after 72 hours. A detailed account of dryage and deterioration of cane varieties in Upper India is given in the 1933 issue of the International Sugar Journal.

	Season.	Proportion of direct purchase.	Proportion of purchase through Contractors.
		Per cent.	Per cent.
38.	1933-34	67	33
	1934-35	70	30
	1935-36	86	14
	1936-37	100	*Nil.*

We are definitely opposed to the employment of contractors unless they possess marked influence and have a financial stake in the area in which they operate.

39. For cultivators taking advances from the factory a form of agreement is signed by them—this agreement is on a maundage basis.

For those taking no advances, no agreement is signed. Advances are given in cash, seed and manure.

40. See paragraph 38. During the period contractors were engaged and signed varying contracts for the supply of cane to the Mill a commission at Rs. 3 per 100 maunds was paid to them—this has to cover the cost of weighments, loading, despatching and dryage.

41. No.

42. Carts arriving at the weighbridges are weighed immediately providing that they have the correct purjis or tickets in their possession.

Gross weights are recorded on the cane receipts and the suppliers off load their cane into wagons or in the case of gate cane to the carrier or trolleys. Having done this their carts are tared, the receipt completed and handed over to the supplier. Cashiers are at all weighing centres and pay on demand immediately.

	Per maund.		
	As.	P.	
43. Season 1933-34—			
Opening rate	5	0	As. 1 premium on Co.214.
From 23rd April, 1937 . .	6	0	Increased rate due to keen competition.
Parsa station—from 1st May, 1934	7	0	
Season 1934-35—			
Opening rate	5	0	
From 7th February . . .	6	0	On all main line stations.
From 16th March . . .	7	0	Contractors' stations—Mainjapur, Colonelganj and Sarju.
From 14th March . . .	7	0	At Kauria station.
From 23rd March . . .	7	0	Contractors' stations—Mainjapur, Colonelganj and Sarju.
Season 1935-36—			
Opening rate	5	6	Government minimum rate.
From 1st December, 1935 .	5	3	Ditto.
From 2nd January, 1936 .	...		
From 9th March, 1936 . .	5	3	On the loop line—Increased by the Factory for propaganda.
From 7th April, 1936 . .	5	6	
Season 1936-37—			
Opening rate	4	9	Government minimum rate.
From 16th December, 1936 .	4	9	Ditto.
From 1st February, 1937 .	4	3	Ditto.
From 1st April, 1937 . .	4	0	Ditto.
From 16th April, 1937 . .	3	9	Ditto Main line.
From 16th April, 1937 . .	4	0	Loop line—Increased by the factory for propaganda purposes.

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44. Yes, rate paid is the Government minimum rate fixed fortnightly.

45. The price of gur has no influence as so little is made here.

46. See No. 45.

47. Yes, see paragraph 43.

48. Under present conditions, the basis is not satisfactory and calculations should be based more on the rates obtained for sugar by average factories than on the special rates obtained by a few factories employing more expensive processes. We feel that the rates are based on a small proportion of special sugars which are being produced by certain factories. We would also suggest that the 8 anna margin which is at present used in arriving at a scale be reduced to enable the cane rate to be adjusted more frequently and equitably. We may have further suggestions to put forward at an early date.

49. An additional price of As. 3 per maund is being paid on Co. 299 cane—an early variety—this is done with a view to encouraging this particular type.

50. The duration of the crop for the past seven seasons is given under Question No. 80. The variations in the duration can be attributed to available supplies of raw material and the economical operating purity of the cane supplies.

Until such time as early and late ripening varieties have been established, it is our opinion that the economic duration of a cane season can be given as from 1st December to 15th April.

51. By the introduction of early ripening varieties the crushing season could be opened probably 2 weeks earlier, but it is questionable as to whether even with a late variety cane, it would be economical to crush later than the 31st May.

52. The Government Agricultural Department has been called upon for assistance in only one matter concerning Red Rot disease; see paragraph 15.

In this matter they were slow to commence operations and in taking action, but have now done so.

	Seasonal Labour.		Silent Season.
53.	1. Skilled . . .	168	Total 146 of which about 75 per cent.
	2. Unskilled . .	468	is skilled labour.

54. Most of the skilled labour comes from other parts of United Provinces and Bihar.

55. No skilled labour is imported from abroad.

56. All skilled labour is provided with quarters. Unskilled labour is local. Free Medical Attention is provided and we have our own dispensary.

57. Power.

Extra fuel burnt during season.	Maunds.	Rs.
1933-34	46,820	4,682
1934-35	34,100	3,410
1935-36	112,100	11,210*
1936-37	15,650	1,565

We do not bale surplus bagasse.

58. By-products. Bagasse, press mud and molasses.

	Season.	Maunds Molasses produced.	Average Rate.
59.	1933-34	71,476	Burnt.
	1934-35	60,470	6 pies.
	1935-36	99,705	3 ,,
	1936-37	80,550	6 ,,

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* The factory supplied power for irrigation purposes to Balrampur Raj Estates.

The general fall in price is due to the supply being much above demand.

60. Indian Molasses Co., Ltd., Cawnpore Distillery.

Local (very small sales).

Tank wagons and in drums.

Railway facilities are inadequate.

Rail freight paid by purchasers.

61. Surplus waste molasses are destroyed in a Brooks' Molasses Furnace or utilised for steam generation. For steam generation purposes, molasses are not very satisfactory on account of the large deposit of ash of a corrosive nature on boiler tubes, etc. It is suggested that molasses may be utilised for the production of Power Alcohol, Acetic Acid, Ether, Chloroform, Glycerine, Ascetone, Citric Acid, Butanol, Carbon Dioxide for dry ice and Yeast.

62. At present there is no outlet for surplus bagasse, small quantities only being taken by the cane suppliers as fuel. Bagasse could be manufactured into paper or board but the initial cost of the manufacturing plant will be high.

63. Sulphitation and well weathered carbonitation press mud can be utilised as a manure.

Storage and Transportation of Sugar.

	Beginning of Season.	Maunds	End of Season.	Maunds.
64.	1934-35 . .	577	1933-34 . .	41,069
	1935-36 . .	*Nil.*	1934-35 . .	108,678
	1936-37 . .	9,374	1935-36 . .	80,110
			1936-37 . .	137,147

65. Stored in Godowns—

The capacity of No. 1 godown 12 bags high is 42,000 maunds.

The capacity of No. 2 godown 12 bags high is 46,500 maunds.

The capacity of No. 3 godown 12 bags high is 42,000 maunds.

The maximum capacity of No. 1 godown is 63,000 maunds.

The maximum capacity of No. 2 godown is 69,750 maunds.

The maximum capacity of No. 3 godown is 56,000 maunds.

The third godown was built in 1936.

66. The extent to which sugar may deteriorate is chiefly dependent upon the period of storage and weather conditions. Apart from the period of storage and weather conditions factors influencing the keeping quality of sugar are numerous but it may be stated that the construction and conditions of the godowns in which sugar is stored, temperature at which the sugar is bagged, packing, stacking and stacking medium employed together with sugar quality all play a part in the keeping quality of sugar.

67. Damaged sugar is usually reconditioned.

68. The production of sugar of greater purity of bold and regular crystal, free from dust and broken grain, will undoubtedly improve the keeping quality.

69. The damage of sugar in transit from the factory can be attributed to the type of rail wagon or flat used and weather conditions during transhipment.

70. Yes, especially during the grain seasons.

71. We would suggest that the Railway carry a much larger stock of wagons and have them so ventilated that a free passage of air is allowed to circulate without fear of rain water getting into the wagon.

72. Our sugars are sold on a f.o.r. factory basis, the price being one for important markets. We have no record of secondhand prices for our product at the ports and up-country, but give below the actual f.o.r. prices obtained

during the past 4 years. We also give the freight from the factory to the ports and certain up-country markets:

F.o.r. Prices.

Season.	I Sugar.	II Sugar.	Both Sugars.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
1933-34	8 6 1·2	7 13 0·3	8 4 2·4
1934-35	8 8 7·3	...	8 8 7·3
1935-36	8 1 5·2	...	8 1 5·2
1936-37	6 9 0·2	...	6 9 0·2

Freights.

Station.	Freight.
	Rs. A. P.
Allahabad	0 12 8
Cawnpore	0 5 5
Lucknow City	0 4 6
Calcutta	1 2 0
Bombay	1 1 3
Madras	1 2 0
Karachi	1 0 0

73. We enclose copies of the Balance Sheets.

74. We give below amounts of depreciation written off by the Company from 1933, also the statutory amount allowed under the Income-tax Act, 1922. Depreciation is usually a round sum based, as nearly as possible, on the statutory scale.

	Statutory.	Written off.
	Rs.	Rs.
1933-34	83,327	83,265
1934-35	92,291	1,00,000
1935-36	99,370	1,00,000

The figures given are for the Balrampur Sugar Co., Ltd., of which this unit forms a part.

75. We give below the amounts set aside for Reserve Fund:

	Rs.	
30th June—		
1934	50,000	
1935	50,000	
1936	3,30,000	(Premium on New Issue shares transferred to Reserve.)

The above figures have reference to the Balrampur Sugar Co., Ltd., of which this unit forms a part.

76. We give below amounts distributed as dividends by the Company:

	Rate.	Amount.
	Per cent.	Rs.
30th June—		
1934	10	1,70,000
1935	10	1,70,000
1936	10	1,70,000

These figures refer to the Balrampur Sugar Co., Ltd., of which this unit forms a part.

77. The Bank allows overdrafts under agreement for cash credit, by which stocks, etc., are pledged. The rate at which the Company, of which this unit forms a part, is able to borrow is, bank rate subject to a maximum of 9 per cent. and a minimum of 3 per cent.

78. Head Office expenses and Managing Agents' commission amount to Rs. 16,462 for 1935-36 in respect of the Balrampur Sugar Co., Ltd., of which this unit forms a part. The Managing Agents' commission is calculated at 6 per cent. on the net profits after providing for depreciation at the statutory scale, income-tax and interest on debentures or other loans, but before placing anything to reserve or other special accounts.

79. Considering the hazardous nature of the enterprise, the risks of drought, floods, pests, the machinations of buyers, the Excise Duty, the costs of maintenance, the demands of taxation, a balance of 10 per cent. at credit of revenue, after allocations to depreciation and reserve accounts, is not excessive.

80. Forms* 1, 2 and 3 referred to are attached. As regards Forms 1 and 2, the figures in respect of 1936-37 cannot be submitted as our financial year is not yet closed.

81. Owing to the complicated nature of the returns called for we are unable to submit the information in the allotted time, and we will do so as soon as the returns are completed.

82. Every possible economy has been effected in the works and efficiency brought to a high standard, comparing favourably with other sugar producing countries, that there is very little margin for further reductions in the works and we must now look to a higher sucrose content and for further reductions in cost of cane.

83. Punjab.

84. We are unable to give particulars of the relations between dealers and retailers, but so far as we are concerned, we are put into touch with our dealers by our brokers. Up to this year we had several brokers working on a commission basis from 8 to 12 annas per Rs. 100. These brokers would make us offers, which, if accepted, would be confirmed by contract between ourselves and the dealers, a deposit being required as Earnest Money, which the dealers paid; interest was allowed on this deposit. During the current season, we have obtained Sole Distributors for the whole of India Messrs. Ralli Bros., Ltd. While the system of their making us offers on behalf of dealers still continues to a lesser extent, the chief method of doing business is for us to give them option for a fixed period on quantities of each grade sugar which we wish to dispose of, fixing the minimum price at which they can sell. In this case also, the arrangement between them and ourselves is by agreement, the actual contract, which is supplementary to the agreement being entered into primarily between them and their dealers.

85. The New Indian Sugar Mills Association contract form is satisfactory except as regards Clause 8. The responsibility for the condition of sugar *sold f.o.r. Factory* should be more clearly defined, as falling upon the buyer. Unless the buyer takes delivery at factory it is impossible to prove in what condition the sugar was despatched, and whether damage took place while in the hands of the carrier.

86. The figures with regard to this question can be obtained from dealers, importers and brokers. We ourselves are unable to give accurate figures, especially as most of our business in the past has been done through dealers in the Cawnpore market, and on an f.o.r. Factory basis.

87. Variations in this case will occur when comparing wholesale forward business with ready petty sales, but for spot business there is little fluctuation between wholesale and retail prices, though the difference between these

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* Not printed.

actually varies according to quantity, up to approximately 4 annas per maund.

We have taken the retail prices as covering lots of 5 to 25 bags, which are not necessarily in shop-keepers hands, there possibly being a further difference in the actual shop price to the consumer.

88. We have very little information as to the storage arrangements made by dealers, but from our experience we understand that they are disinclined to keep stocks, preferring to utilise factory storage space, even to the extent of getting 3 or 4 months in arrears in deliveries. We have already given you our experience with regard to deterioration in storage against Question No. 66. We have no definite information with regard to conditions prevailing in dealers' godowns.

89. Under similar storage conditions we are of the opinion that Java sugar will deteriorate to the same extent as a good quality Indian sugar.

It is only in very recent years that the keeping quality of sugar produced in India has become a subject for serious consideration, since large stocks of sugar must now be stored throughout the monsoon period. Since it has been recognised that there has been a vast improvement in the quality of sugar manufactured in India, the keeping quality has also undoubtedly improved.

90. With the exception of the demand for Indian made sugar by a limited number of orthodox Hindus on religious grounds, Java, or other imported sugar is preferred, particularly by the middle and upper class Indian consumers. The reason for this is, we believe, the uniformity of grain and superior, consistent colour of the imported sugar.

91. The average quality of sugar manufactured in India is inferior to imported Java sugar but there are many factories in India producing a final product equal, if not superior, to that of Java.

The average Indian sugar is inferior to imported Java sugar in respect of purity, colour and uniformity of crystal size.

92. In our opinion the manufacturers carry the bulk of the stocks of Indian made sugar, the only dealers carrying stocks to any large extent being those at ports where storage facilities are offered by the Carrying Companies. Up-country dealers normally carry only sufficient stock for the immediate need of local retailers.

93. Yes. We consider this most desirable.

94. We favour a Central All-India Selling Organisation, provided licensed control of production is also introduced. We consider, however, that it should be independent of Government control.

95. We think that the present system of standardisation is open to grave question. The value of a sugar does not depend on the size of the crystal or on its appearance in bulk in a glass container. Further, it is impossible to get two observers to agree as to the standard on such a crude system.

We would favour standardisation on rational lines which would include—

(1) The polarisation or sugar content.

(2) The colour determined in some formal way in an apparatus such as the Lovibond Tintometer and expressed in definite colour units.

(3) The quantity of suspended matter.

(4) Possibly, but not necessarily, the quantity of ash might also be included. Ash is of importance to the sweetmeat maker but he is not yet educated enough to appreciate its influence.

(5) Uniformity of grain and absence of dust may also be included.

96. (*a*) We have done no business so far on the basis of sugar standards. The reason we have not yet sold on this basis is that the graduated scale of price difference has not yet been agreed upon and the Industry as a whole is not prepared to sell on the basis of the standards. It is also felt

that most factories are not yet in a position to turn out a uniform product capable of being graded under the standards.

(*b*) Yes. These standards are being used extensively at all our factories for internal control.

97. As opposed to standardising sugars, Messrs. Begg, Sutherland and Company's Group of Factories are to base their selling standard in respect of the next season, as follows: Factory Managers are to be asked to lay aside a certain number of bags of sugar now, of a standard which they expect to maintain during the next season. These bags are to be used as samples next season and the output based on these samples. Special care will be taken in storing these bags during the monsoon.

98. The possibilities of establishing a central marketing organisation, including a complete survey of markets, has been before the Indian Sugar Mills Association from time to time, but no progress has been made. We are in favour of an organisation on the lines of the Cement Marketing Board being set up, provided its control is vested in an independent body and it embraces all producers, with Government prohibition of new factories and extensions for purposes other than improvement of quality and efficiency.

The establishment of a "futures" market by dealers Associations, on the lines of the East India Cotton Association should make for stability in prices by providing security for dealers operations, and thereby improving the general trade in sugar.

99. Over a period of seven years we believe the consumption of sugar, including Khandsari, and sugar refined from gur, to be about 1,300,000 tons annually, but as a result of the lower prices now ruling this figure should be exceeded. An increased advertising campaign by the Industry through its Associations and possible collaboration with the Tea Industry would, we believe, lead to increased consumption, the necessary funds being provided on the lines of the Indian Tea Cess.

100. We believe that factory sugar is replacing gur in the trade in increasing quantities, but we have no reliable information.

101. We see no immediate prospects of the establishment of fruit canning in India.

102. This information can be given much better by importers such as Messrs. Ralli Brothers, Ltd., Calcutta, Bombay, Madras and Karachi, Messrs. A. H. Bhiwandiwalla, Bombay, Messrs. Parasram Paroomal & Co., Calcutta, and Messrs. Kian Gwan Co. (India), Ltd., Sassoon House, Calcutta.

103. It may be accepted that Java, the chief importing country, has not realised remunerative prices for her sugars in any year between 1930 and 1936. In support of this view there is the knowledge that Java's production has fallen from 3,250,000 tons in 1930 to 500,000 tons in 1936.

104. None by sea so far as we know. A relatively small quantity finds its way across the Northern Frontiers.

We do not consider India could profitably export sugar unless world prices advance very considerably and then only if Indian sugar received specially favourable treatment on entry into the United Kingdom. There is, of course, the very remote possibility of India being in a position to sell a portion of her production for export at a loss, provided there was a compensating rise in internal prices.

105. The imposition of the first levy of Excise had some effect in not inducing unadvised expansion which would, however, have been better prevented by a system of licensing and zoning at the time protection was given, and in relation to a considered estimate of the demand existing for sugar in India. The latter imposition coincided with a period of abnormally low prices for sugar, which persists to-day. Owing to trade conditions the manufacturer, except for a very brief period, has not been able to pass on any share of the excise to the consumer. We have never understood why the cane growing section of the industry has not been called on to bear some share of the excise. The industry could have accepted with comparative equanimity a levy on profits on a reasonable scale.

106. A certain quantity is absorbed in the manufacture of country tobacco. Where distilleries exist molasses form a base for the production of alcohol. Recently a molasses exporting corporation has set up an organisation for the collection and export of molasses and has made extensive purchases. No data is available with us regarding the extent of these transactions but they must be of considerable magnitude. The prices realised do little more than cover handling charges. The residue we destroy in specially designed furnaces.

107. This has partly been dealt with under the preceding question. We understand the destination of the molasses exported by the Corporation is the United States and the United Kingdom and it is used for the production of industrial alcohol. The possibility of export is handicapped by the inadequacy of transport facilities.

108. We are not altogether clear as to what is meant by " effective ". If the development of an industry by an increase in production 1,000,000 tons is effective the answer is " yes ". If " effective " means the establishment of an ordered industry with security of capital combined with sound finance the answer is " no ".

The effect of the import tariff, created in 1932 has been to create a barrier against imports from abroad behind which the industry has developed at an extraordinary rate of progress—a very unhealthy rate as events have turned out. This expansion has taken place without any control either by Government or the industry itself. What appeared to be an attractive outlet for capital seeking employment has resulted in the launching of numerous undertakings without any proper consideration being given to local conditions. Supplies of suitable raw material—financial requirements and in many instances without adequate, or even any, expert knowledge. The result has been that although India has been rendered self-supporting as regards her sugar requirements, her revenues have suffered severely from an almost complete stoppage of imports, while the domestic industry due to the reckless establishment of factories—many of which are unsuitably situated, the need of replacing revenue hitherto realised from the import tariff by the imposition of an excise duty—an utter absence of any organisation for the marketing of its sugar finds itself to-day confronted with a situation which, to say the least of it, can only be described as extremely critical even in the case of the most efficient units of the industry.

109. The original object of protection aimed at the country producing its total sugar requirements, and this object has already been attained. We therefore consider that the extent of protection should be kept at such a level as to limit imports of foreign sugar.

We are of opinion that the existing level of protective duty is such that the ryot obtains an equitable return for his enterprise, and that this will only continue provided the position is not aggravated by imports of sugar from abroad.

It does not follow that world conditions will remain unaltered between now and 1946, and we therefore recommend the present level of protection being maintained, and further, that the Government should take powers to regulate it as and when necessary, to limit the entry of foreign sugar into the country.

110. (1) Improvement in Agriculture and Communications and the application of research so as to reduce the cost of cane and improve its sugar content.

(2) Means to control borer infestation and simultaneously increase the sugar content of the cane.

(3) The adoption of the zoning system which will allow factories to help the small grower to make use of the results of research.

(4) Means to ensure the manufacturer obtaining a fair share of the protection by correlation between the cost of cane and effective selling price of sugar (after deduction of Excise) which will demand a centralized marketing organisation with power to regulate sugar prices.

111. So far as we are aware, no industry has been affected by the import duty on molasses.

The Ratna Sugar Mills Co., Ltd., Jaunpur.

Reply to Questionnaires issued by the Sugar Tariff Board.

1. From January, 1934—capacity 500 tons per day.

2. See Schedule 'A' attached hereto.

3. Yes.

(*a*) In respect of cane supply only.

(*b*) Yes, facility of rail only available.

(*c*) No.

4. Double Sulphitation.

5. *Nil.*

6. No extension is contemplated.

7. (*a*) Supply of cane only.

(*b*) 500 tons at least.

8. No information.

9. (i) & (ii) No.

10. No.

14. (*a*) & (*b*) No change at all.

16. No assurance but supply dependant upon climatic conditions. Cane crushed—mostly of ordinary Coimbatore type.

17. No competition during the last two years. Before that prices used to be increased by about 40 per cent. to 50 per cent. of the minimum (fixed by the Government) during the last month of the season.

18. (*a*) Yes.

(*b*) Mainly price that is paid for cane, and particularly, (i) variations are resultant upon rainfalls. (ii) & (iii) Variations are effected by the fall in prices of sugar and gur.

19. No excess in our area.

21. Difficulty is experienced by cultivators for delivering their cane for cartage and communications.

22. (*b*) Yes. 'Zones' should be allotted and should be regulated by Government supervision (Government Cane Inspectors).

24. (*a*) Yes.

(*b*) (i) & (ii) Yes.

25. See Schedule 'B' attached hereto.

26. Transported by carts only—average weight of each cart is 26 maunds, if surrounding roads are metalled the load may be increased by at least 20 per cent.

27. All the roads belong to the District Board and are in worst condition.

28. On an average of 8 to 10 miles. Time taken is roughly 24 hours.

29. Average cost of hiring carts is six pies up to 5 miles and one anna beyond 5 miles per maund.

30. Not uptill now.

31. Normal period of detention of carts at the factory is 24 hours.

32. Up to 65 miles. Takes at least 48 hours. Railway arrangements satisfactory.

33. We prefer a flat rate.

38. (*a*) & (*b*) Cane purchased at the gate comes directly from the cane-growers and cane purchased at railway centres comes through agents. For details please see Schedule 'B'.

40. Agents are paid a commission of Rs. 2-8 to Rs. 3 per 100 maunds of cane, *plus* expenses.

42. Payment made within a few hours after delivery.

43. See Schedule 'C'. Prices do vary.

44. Price of cane depends on the price of gur.

47. In season 1934-35 prices of cane were paid much higher than the minimum fixed, owing to the high prices of gur.

48. Not satisfactory.

50. See Schedule 'D'.

52. No assistance given, either by the Imperial Council of Agriculture and Co-operative Departments.

53. Molasses only.

59. See Schedule 'E'. Variations due to quantity of cane crushed.

60. Principal market is Calcutta. Tank-wagons are provided by East Indian Railway but not in sufficient quantity. Average freight is As. 5 per maund which should be much lower.

61. If power alcohol is allowed to be made, molasses can easily be utilised.

64. Stock of sugar at beginning and end of crushing season 1935-36 was about 2,600 bags.

65. Capacity of godowns is for 40,000 bags.

66. One per cent. of the total production. Dampness and eating by wasps are the main causes.

67. Re-conditioned.

69. Damage due to shortage of water-proof wagons and pilferage at stations.

70. Not very often.

71. Type of wagons should be air-tight

73. Enclosed herewith.

76. For 1933-34 3 per cent. on Ordinary as well as Preference shares.
For 1934-35 3 per cent. on Ordinary as well as Preference shares.
For 1935-36 7½ per cent. on Ordinary as well as Preference shares.

77. Cash Credit from Bank at 1 per cent. above Bank rate.

78. See Schedule 'F'. Managing Agents commission is determined after taking into account depreciation, income-tax, etc., *i.e.*, on the net profit.

79. At least 7½ per cent. after providing something for Reserve Fund.

80. See the annexed forms.*

81. (iii) Overhead charges have been reduced to the minimum.

83. Central Provinces and some districts of United Provinces close to the mills.

105. (i) It has increased the cost of production of sugar and decreased to the same extent the profits of the sugar mills.

(ii) Has further increased the cost of production of sugar generally and has indirectly reduced the cost of cane.

109. At least the same rate that has been prevalent up till now.

Question No. 2.

SCHEDULE (*a*).

1934.	1934-35.	1935-36.	1936-37.
Mds. Srs.	Mds.	Mds.	Mds.
55,662 20	123,950	226,742½	227,665

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* Not printed.

Question No. 25.

SCHEDULE 'B'.

	1934. Mds. Srs.	1934-35. Mds. Srs.	1935-36. Mds. Srs.	1936-37. Mds. Srs.
Local . .	173,262 33	44,076 20	974,009 7	1,119,028 1
Rail . .	524,812 24	1,024,050 39	1,479,405 25	1,077,331 10
TOTAL .	691,075 17	1,464,820 19	2,353,414 32	2,196,359 11

Question No. 43.

SCHEDULE 'C'.

	Rs. A. P.	Rs. A. P.	Rs. A. P.
Average price of cane per maund.	6 3·4 0 0	0 6 2·5	0 5 11·5

Question No. 50.

SCHEDULE 'D'.

3½ months . 4 months 24 days . 5½ months . 4 months 20 days.

Question No. 59.

SCHEDULE 'E'.

Quantity of Molasses—Approximate.	30,000 Mds.	60,000 Mds.	90,000 Mds.	65,000 Mds.
Average selling rate per mensem.	Re. 0-3-6	Re. 0-3-6	Re. 0-2-8	Est. Re. 0-1-3

Question No. 78.

SCHEDULE 'F'.

	Rs. A. P.	Rs. A. P.	Rs. A. P.
Annual H. O. expenses	26,308 8 0	39,633 9 2	42,228 0 0
Managing Agents, Commission.	4,348 4 0	9,328 4 3	32,941 12 0

The Lakshmi Sugar and Oil Mills, Limited, Hardoi.

Reply to Questionnaire.

1. This Factory started crushing in year 1935-36, and its full capacity is 1,400 tons.

2. *Output of Sugar*—

Year.	1935-36. Mds. Srs.	1936-37. Mds. Srs.
1st quality . . .	282,017 9	295,090 0
Other qualities . .	14,097 20	7,861 19

3. (*a*) There is no other factory within a radius of about 40 miles, and except for the fact that last year's sugarcane production was very poor due to excess of rains the surrounding area is rich in cane. There is no advantage of proximity to other raw material.

As to markets it is nearest to Cawnpore except Lucknow Sugar Factory. It is also centrally situated for south United Provinces, Central India, Central Provinces and Punjab markets.

(*b*) Hardoi is a district town. Rail facilities are satisfactory as Hardoi Station is on the main line and all the trains stop here. There are 4 metalled roads connected with the interior but they are not properly maintained and there are no feeder roads.

(*c*) Labour supply is quite adequate.

4. We manufacture sugar by sulphitation process, which is cheaper. On the other hand the carbonitation process which is the only other process in vogue in India produces a whiter sugar and gives a better percentage of yield. Unless the factory is favourably situated in regard to limestone and coke supply, the aforesaid advantages are counterbalanced to a major extent by additional cost of manufacture.

5. No change in the lay out of our factory has been made. In the last year we have fitted cane cutting knives, 4 Babcock Boilers and one vacuum pan at a total cost of Rs. 80,000.

6. We intend to improve the clarification of juices by addition of juice heaters and filter presses, and to make up the deficiency in the capacity of our evaporators by installing a bigger set.

7. (*a*) The overhead charges of a factory decrease relatively per unit increase of crushing capacity. The larger the factory, the less are the proportionate charges on skilled directing staff, depreciation and certain factory operations. The size will ultimately be determined by the Capital available, the availability of raw materials at a reasonable price in the neighbourhood and the facility of access to markets.

(*b*) In other sugar producing countries like Java, Hawaii, Cuba, Mauritius, Africa, South America, the smallest unit is usually 1,000 tons. Large scale factories can be operated advantageously if there is an assured supply of cane for whole of the working season. Under Indian conditions, in the absence of factory plantations, supplies of cane in large quantities for the full length of the season cannot usually be managed. In our opinion, therefore, a 600 tons plant may be regarded as an economic size.

8. Simple parts such as cast iron tanks and pipes and other plants comparatively easy to manufacture are obtainable in India. Generally speaking, sugar machinery is a specialised manufacture and has to be imported.

9. Technical assistance, given by the Sugar Technologist of Imperial Institute of Sugar Technology is satisfactory to some extent. As for industries Department we are not aware if any technical assistance is given by them.

The assistance usually sought of the Imperial Institute can be divided into three classes:—(I) Information in Engineering, (II) Information in Sugar Technology, (III) Commercial and Statistical informations. The assistance now available under heads Nos. 1 and 2 is very general and is available in the form of professional consultation. There should be an experienced and competent engineer who should call engineering control data from each factory and as a set routine advise the factories on any deficiencies detected by him and also assist the factory engineers in all their technical problems. From time to time he should bring to the notice of the industry improvements or new designs in machinery and its working. II. Under this head it is known that the factories send periodically full reports on chemical control. We suggest that these reports be closely scrutinised by the specialist of the Institute and factories should be advised in detail of the discrepancy and the way to avoid them.

10. We do not undertake any cultivation. All the land belong to petty zimindars who claim very high prices for the same; and ejecting the tenants from these lands is not possible unless they give their consent. Also land is not available in large areas in the vicinity of the factory or within a radius of 10 miles.

11. (*a*) to (*f*) *Nil.*

12. (*a*) *Nil.*

(*b*) 200 acres in the last season under control of Cane Development Scheme.

13. As only last year our factory started we had no time to take much interest in the experiments of cane yet we did some experiments on Co. 331, Co. 312, etc., varieties, in the last season through Cane Development Scheme.

The Agricultural Department is working out their scheme of Cane Development within a radius of 5 miles from the factory, but we do not think there has been any serious effort in developing early and late varieties.

14. (*a*) In the season 1935-36 generally the cane crop was good but in the season 1936-37 the crop was damaged by heavy rains and therefore the production has been less.

(*b*) The Agricultural Department introduced 2 new varieties Co. 312 and Co. 331, but the experiment of 331 which is a late ripening variety has not proved a success.

15. We have experienced no such calamity up to this time and disease or insect pest have never destroyed the crop in our 2 working seasons.

16. At present not: though the area is very extensive it has still to be developed. Lack of good feeder roads are other drawbacks.

Up to this time only Co. 213 and Co. 290 were principal, varieties yield per acre of Co. 213 was 300 maunds and of 290 was 350 maunds per acre.

17. The competition of other factories has a direct influence on the supply of cane which increases according to the magnitude of the demand. Since the last 2 years, there has been no competition in price; only the competition enables the cultivators to dispose of their cane earlier.

18. (*a*) Yes.

(*b*) (I) Nearly 40 per cent. of our last crop was spoilt by the excess of rainfall.

(II) Due to the heavy fall in the prices of sugar the minimum price of cane was also successively reduced from As. 5-6 to As. 4 per maund and its attractions as a highly profitable crop almost disappeared and to the cultivators situated at long distances there was left no profit after paying the cartage.

(III) It does affect the supply of cane and if the prices of gur go high the cultivators in the interior prefer to make gur instead of bringing the cane to the factory. But jaggery prices for the last 2 years in the most part have remained low.

(IV) It has affected the sowing of cane for our next season very much. In the months of February and March when generally the cane crop is planted the price of wheat was very high hence the cultivators restrained themselves from sowing cane and left their fields for sowing wheat. Thus the cultivation has been reduced by about 30 per cent. this year.

19. Due to heavy rainfall the cane crop in this district was spoilt by 40 per cent. and the production has been lower than the year 1935-36. The cane production here is still 30 per cent. short of our requirements and the gate cane is nearly 50 per cent. less than some of the favourably situated mills in India.

20. Cost of cultivating one acre of sugarcane by an average cultivator and the outturn per acre:—

	Rs.	A.
1. Ploughing 5 times	5	0
2. Manure (dung manure)	6	0
3. Seed 40 maunds per acre at As. 5 per maund .	12	8
4. Irrigation charges by canal	11	0
5. Harrowing, etc., 4 times	10	0
6. Land Revenue or zimindari rent	10	0
Total .	54	8
Average outturn per acre=300 maunds, cost of 300 maunds at As. 4 per maund=Rs. 75.		
Profit .	20	8

21. In United Provinces specially in western side the cane-growers have to face many difficulties—

I. Though after the Permanent Tenancy Act of 1926 Zimindars have no right to eject any cultivator from the land under his cultivation or to increase the rent as long as he continues to pay his rent in time yet they always find means to get a hold on the poor cultivators. The cultivator is never in a position to pay the rent on the exact date fixed for a season and the zimindars always take advantage of this weakness. They attach the standing crop of the cultivators and sell it. In this way the price and profit goes in the pocket of the zimindars. Sometimes they claim higher rents or nazranas for releasing the attached crop or they release the crop on batai, *i.e.*, on half and half price of the crop. At some places the zimindars give land to the cultivators on batai system or sharing half the total production of the land in lieu of rent. This system is in a way quite ruinuous for the cultivators because as soon as the crop is ready for harvesting the zimindar get hold on it and dispose it of keeping all the money for himself and giving nothing to the poor cultivator for his hard labour. Measures should be taken to stop this system.

II. *Irrigation.*—This is also a very difficult problem for the cultivators. (1) The watering charges of the Irrigation Department are very high. (2) Once water is given to the cultivators and if due to some defect in the water supply channel the water does not reach the plot even then he has to pay full charges for that crop and for the whole season. In another case a cultivator does not want to irrigate a certain plot through which a water channel or "gool" is passing but if by chance that plot is flooded with water by the breaking of the bank of that "gool" then he has to pay for whole of that plot though the water instead of doing some good ruins his crop. (3) The Irrigation Department does not adopt full measures to clean the channels and to keep the banks of these channels in good order; this work is left to the poor cultivator who in order to get sufficient supply of water cleans the channels and has to take out a lot of mud every year. (4) Patrols and ziledars, etc., tease the cultivators very much.

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III. *Scarcity of Manure.*—The only manure which a cultivator can use is cow dung manure, but if he uses all the dung as manure then he does not get fuel which he has to purchase. To avoid this extra expense on his livelihood he uses the dung as a fuel and not as a manure and thus his crop does not get full nourishment. The Agricultural Department should introduce some effective and cheap manure and oil cakes. Measures should also be adopted to reduce the prices of these chemical manures and oil cakes which at present are very very high. The factories should distribute such manure to the cultivators and realise the cost by payments in instalments.

IV. *Road conditions.*—The village kutcha roads and district and Municipal Boards pucca roads usually remain in a very bad state of repairs and are a source of danger to the lives of bullocks and carts. Sometimes when the cane carts have to pass roads full of ditches a number of persons must give shoulders to help the bullocks to pass over it. The matters become worse after the winter rain and the villages are entirely cut of from the factory, the working of which is more often than not completely disorganised. Moreover there are not sufficient feeder roads to connect the interior of the cane growing area with the main road, which is very discouraging to the cane-growers.

V. In Hardoi and other places toll tax is charged by the Municipal Board on the cane carts. Now when the price of cane has dropped so very low this burden of toll tax is disproportionately heavy on the heads of the poor growers. At some places only to avoid this toll tax the cultivators take their carts to such purchasing centres where there is no toll tax though they have to go a long distance. This toll tax should immediately be removed.

VI. *Co-operative Societies.*—The cane crop gives its return after full one year; within these 12 months the cultivator has to take loan from the Co-operative Societies for his maintenance. The high rate of interest of these Societies and the strict and often harsh ways of realising the dues are very vexatious, and instead of being a help do disservice to the cultivators. Such institutions, however, if properly controlled and guided can do a lot of good to them.

22. (*a*) We are not aware of the reasons of the previous Tariff Board for concluding against compulsory acquisition for leasing of land though we realise certain difficulty inherent in it. Our experience is that private negotiations are seldom successful when a number of cultivators are a party to the negotiations. We are unable to obtain any land even for the purpose of an experimental farm because as soon as the cultivators come to know they never agree among themselves. We suggest that the Government should sympathetically assist the factories in getting enough land to carry on experimental work, and to produce seed cane.

(*b*) Under the Cane Rules, purchases of cane within 5 miles radius of a factory by any outsider is prohibited. This is the only possible measure of zoning where factories are situated at every station on a line. Where, however, factory is separated by a number of stations and where factories command large cane areas in the interior, zoning system has obvious advantages. It will obviate the present economic waste in two factories though situated far apart, each brings cane by rail from the neighbouring stations of the other factory. The factories will try to preserve their zones and the cane supplies will become regular.

23. By the zone system, factories will be sure of getting cane from the cultivators of the zones. Advances and other facilities in the shape of distribution of seed and manure now being provided by most of the Factories on their own initiative or through the Cane Development Schemes will be further encouraged.

The development of the feeder roads should be undertaken by Local Boards which get ample revenues by the levy of the maximum circumstances and property tax on the factories and such other bodies as collect toll and road taxes.

24. (*a*) Yes, we strongly urge the fixation of quotas to regulate the production of sugar. The basis for fixing the quotas should be a mean of the daily crushing capacity of the mills and the daily average of cane actually crushed during the last 3 years. The mean daily capacities of all the factories should be totalled in terms of tons of cane and the total annual production of sugar be divided by the total capacity tonnage which will give tons of sugar to be produced by each capacity ton, this multiplied by the mean daily capacity of each factory will give its quota.

For example if the total daily crushing capacity of all the factories be 100,000 tons cane (c) and the sugar required to be produced be 1,000,000 tons (s) then $\frac{1{,}000{,}000\ (s)}{100{,}000\ (c)} = 10$ tons sugar per 1 ton cane crushing capacity. The quota for a 600 tons mean crushing capacity factory will be $600 \times 10 =$ 6,000 tons of sugar.

(*b*) The establishment of new factories and the extensions of old ones should be restricted by means of license. The extension of old factories should be totally stopped and new factories must not be started in United Provinces, Bihar, Punjab and Bengal, for a few years.

		1935-36.	1936-37.
25.	(*a*) Gate cane . .	47 per cent.	43 per cent.
	(*b*) Rail cane . .	53 ,,	57 ,,

Due to the heavy rainfall the cane in the vicinity of the factory was damaged otherwise in the natural course the percentage of gate cane in 1936-37 would have increased.

26. All our gate cane is transported by bullock carts. A nominal beginning was made last year to transport cane by lorries. Average weight of cane per cart is 20 maunds. As compared to country carts rubber tyred carts are very expensive. To popularise them the cost must be reduced at least by half and even then the cultivators will require facility in the shape of payment by instalments. A Dunlop Cart can carry 60 maunds of cane.

27. The mileage of roads near our factory is satisfactory though there is always scope for extension of these facilities. The condition of main roads is not very satisfactory. There are no feeder roads.

28. 80 per cent. carts come from a radius of 10 miles and 20 per cent. from distances over 10 miles. Time taken between cutting cane and delivery at factory is about 24 hours. There is no appreciable deterioration of cane during road transport except of course in the hot months. No practical method of protection is known.

29. The average cost is 1 pie per maund per mile. Mostly the cultivators employ their own carts. The average cost of hiring is on an average 1 anna per maund, *i.e.*, for 2 to 5 miles=6 pies, 5 to 10 miles=1 anna, 10 to 12 miles=1 anna 6 pies per maund.

30. Municipal toll tax at the rate of 3 annas per cart is charged here.

31. Only from the past season we have arranged to enter into formal agreements with every growers within a radius of 10 miles and by dividing the total quantity of cane of a grower by 120 days we issue him requisition slips on his turn. Normal period of detention of a cart at the factory gate is not more than 8 hours.

For weighing cane carts at the factory gate we have installed lorry weighing machines of 5 tons capacity instead of usual 3 tons. This enables us to weigh the cart including the bullocks and the cartmen. The standing yard has been divided into a number of rows so that all the carts stand in an orderly fashion and there is no confusion or congestion. The price of cane is paid immediately after the tare weight is taken.

32. By rail the cane is transported from an average distance of 45 miles. Time taken in cutting of cane and delivery at factory is between 36 to 48 hours.

The Railway arrangements are most unsatisfactory and the rules relating to the loading and unloading and transport of cane are based on utter disregard of the Factory Owners difficulties, and are quite arbitrary.

Among the loading difficulties, are the irregularities in the allotment of plots on the station premises for loading and unreasonable restrictions on the building of suitable cabins. Though the Railway earns huge revenue from this traffic, the plots are never levelled up and no loading ramp is built: the provision of approach roads is considered quite unnecessary.

The Station Masters have great powers of interference and in the allotment of wagons, loading time, restrictions in loading, etc., they get opportunities to harass the Mill representatives. Bribery and corruption also follow in wake.

The transit of loaded cane wagons is done entirely at the convenience of the Railway and their arrival at the Factory is so irregular that it invariably results in either congestion or shortage. On the top of this the demurrage charges are so framed that unless the Factories do not keep a 24 hours vigil and proceed to empty the wagons forthwith, they are immediately presented with a stunning demurrage bill.

The cane trucks in use at present should be substituted by cage wagons which are specially meant for the transport of cane.

The Railway should adopt a more sympathetic attitude towards the Industry and its complaints should receive prompt attention.

33. Railway charge a flat rate for a four wheeled truck. Previously it was Rs. 7 per truck over 30 miles, but now it is Rs. 10 over 35 miles. The previous rates were quite satisfactory. We do not prefer a maundage rate per mile as it will create many difficulties and delay in weighment at every weighing station.

34. The Railway freight on manures should be reduced to encourage its increasing consumption.

35. No Tramways.

36. Yes, if a deduction of 1 pie per maund per mile is allowed from every place and distance, the system of tramways can be advantageous. The present sugarcane rules disallow the deduction of cartage charge of 1 pie per mile per maund unless the purchasing centre be situated at a distance of 5 miles of any station. This restricts the scope of tramways.

The second difficulty is regarding the land. Land alongside roads of the local bodies and canal banks should be allowed free. The third difficulty is in the heavy freight asked for on tramway material for which the railway freight should be reduced to scrap rate.

37. It is difficult to estimate the extent of deterioration but in hot months it is nearly 3 per cent. in 24 hours by rail and 1 per cent. by cart.

38. (*a*) The gate cane is purchased direct from the growers.

(*b*) The rail cane is purchased through agents.

39. We enter into agreements with the cultivators making them sure of the disposal of their total production. We help them in the shape of selected seed and chemical manures through the Cane Development Scheme.

40. We enter into contracts with cane supplying parties for a certain fixed quantities from a particular purchasing centre and pay them a commission at the rate of 1 pice per maund.

41. No.

42. We have 5 big lorry weighbridges for gate cane and one wagon weighbridge for rail trucks. The weighments are made all the 24 hours. Payments are prompt and no cart leaves the premises without taking payment. The interval between delivery and payment is about 2 hours.

43. We have always purchased cane on Government minimum prices in our past two seasons.

44. Prices are fixed by Government and they vary according to the prices of sugar.

45. In the near vicinity of the factory gur, jaggery or khandsari sugar is not a very profitable business, but sufficient increase in the prices of gur, jaggery, etc., does effect the supply of cane and the cultivators start their hand crushers when the prices of gur, etc., go very high.

46. There have been no considerable variations in the prices of gur, etc.

47. We have not paid excess price than the minimum Government rate in our past 2 seasons.

48. The basis appears to be satisfactory with slight alterations; in calculating the average instead of taking the highest price of ten sugar mills, 5 highest and 5 lowest prices should be taken.

It should be so strictly adhered to that the regulations may be timely. The present rules do not appear to provide any encouragement or discouragement for superior and inferior cane respectively.

49. Introduction of a system of bonus for superior cane is advisable provided discount for inferior cane is permitted adopting similar method for judging the superiority and inferiority of the cane. The system, however, is sure to present difficulties.

50. Duration of the crushing season in 1935-36 170 days and 1936-37 130 days. The cane crop in 1936-37 was damaged due to heavy rainfall. The duration of our last working season was very short. For economical working it should be at least 160 days.

51. If fully matured cane giving a purity of 80 per cent. can be available from the beginning of November to the end of May the season can be extended by 40 days more as otherwise the factory is started in the third week of November and stopped in the end of April.

To assure such a long working season one of the essential requisite is factories' own plantations of sufficient area as to supply them sufficient quantity for 40 days.

52. We hear a lot about the working of the Imperial Council of Agricultural Research but the practical benefit obtained has been of little value. So far no staple variety with early or late maturing qualities has been introduced.

The Agriculture Department is carrying on the Cane Development Scheme which is jointly financed by the Sugar Factories and the Government. Besides this, this department or the Co-operative Department have been of no assistance to the industry.

		In Season.	In Off Season.
53.	Skilled labour	...	...
	Unskilled labour	...	...

54. For erection of the entire plant usually European expert erectors are called. We engaged 2 European Engineers for erection and one of them continued as Chief Engineer for 2 working seasons. In the last season a Dutch Chief Chemist and 4 Chinese pan boilers were also employed. The latter did not prove a success on account of lack of co-ordination.

More than half of the mechanical skilled labour is imported from Punjab and the rest are the natives of United Provinces. Similarly a major part of the manufacturing skilled labour is imported from Gorakhpore and its neighbouring districts.

55. This year we propose to have entire Indian staff.

56. We have built suitable quarters. Besides Hardoi being a good sized town, houses are available on rent. For their welfare we have opened a free dispensary and contribute towards games and sports. The labour being from different provinces and of the seasonal character they are not in a position to avail educational facilities.

Power.

57. No. In the season 1935-36 our fuel consumption was 267,900 maunds, *i.e.*, 8 per cent. on cane. We have improved our boiler plant and have effected certain steam economies, and therefore expect the consumption figure to do down considerably. We have bagasse baling equipment and hope to use it in the next season.

By-products.

58. Only molasses. Since all the bagasse is used as fuel and there is no surplus.

59. Outturn for the years 1935-36 and 1936-37 are respectively 119,787 maunds and 112,020 maunds. Price realised is As. 2-6 per maund. There is no variation owing to entire output having been sold to a distillery. In other factories the price since the last 4 years is practically nothing.

60. Except small quantity sold locally for mixing in tobacco, etc., the whole output is sold to a distillery in Bengal. From molasses reservoirs it is pumped direct into the molasses tank wagons, the supply of which is regulated by the railway and the distillery.

The Railway facilities are very unsatisfactory though the industry has been crying for the last 5 years without response. The tanks cannot be sent on foreign railways and are available with great scarcity for supplying molasses to the trade. The freight on molasses from Hardoi to Asansol is As. 4-11 per maund.

61. If we could not sell it the disposal would become a difficult problem with us.

There are various suggestions for its utilization.

The most important way and capable of absorbing the entire output of molasses of all the sugar factories is power alcohol. Its mixing with petrol in certain proportions should be made compulsory or in the alternative the power alcohol in pure or mixed state should be allowed to be marketed under State and its active encouragement.

Other subsidiary uses reported besides spirits, etc., are manufacture of cattle food, making roads, manufacturing yeast, certain chemicals, but the Government have done nothing to encourage research.

62. If we had surplus bagasse we would burn it as fuel during the off season for running the Workshop and Power House.

If bagasse were still surplus and if we had our own light railway for cane transportation, we would use it as fuel for the Locomotives.

One of its other use is the manufacture of card board and fibre board with various exterior finishes in varying sizes and thicknesses to suit many building purposes.

They are made in America with great success.

63. Filter press mud is a waste product of considerable magnitude. In some places it is used after 1 year or so as manure to a limited extent.

If a few simple processes are evolved which would turn it as a good manure it can be marketed easily. Secondly it should be possible by some other methods of treatment to make it as good a fuel as cow dung cake. Mixing the coal particles sifted out of Boiler ashes with filter cake and drying it in sun in the same way as cow dung cake should make it a good fuel value.

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Storage and Transportation of Sugar.

		Beginning.	End.	
		Mds.	Mds.	Srs.
64.	1935-36	*Nil.*	184,110	0
	1936-37	26,050	113,967	32

65. We have 3 godowns with a capacity of about 70,000 bags. An extension is intended to increase the capacity to 100,000 bags.

66. Only the bottom layer and sometimes the piles in front of doors get damaged, the formed on account of excessive pressure and dampness of the floor and the latter due to excessive moisture in the atmosphere. Sometimes if the rain is very torrential the roofs start leaking at some places and the top layer also gets damaged. It is said that the bold grain sugar has better keeping qualities.

67. We remelt damaged sugar in the following working season and bag it in fresh bags. If the damage is very superficial, it is sold at some discount.

68. In Java the sugar is stored in almost airtight godowns. The whole pile of sugar bags is covered in an air-tight fashion by gumming waste newspapers and the godown is kept under a constant temperature by steam pipes and portable boiler.

69. The Railway wagons are sometimes not fully water-tight. In many cases the transhipment is done very carelessly and often the sugar is handled at the destination station in rain or imperfectly shaded platforms causing damage.

70. Once every year the wagons are tested by the Railway as to their water-tightness. At that time and also when the demand for wagons is in large numbers it takes a few days before the requirements are completely met.

71. No.

72. (i) Prices—Rs. 6-14. Port—Bombay. Freight rate—Re. 1 per maund.

(ii) Prices for 1935-36 Rs. 8-4 and for 1936-37 Rs. 6-14. Market—Amritsar, Cawnpore and Nagpur and Freight rate—As. 15-6, 3-11 and Re. 1-7-4 respectively.

73. Approximate Balance Sheet figures for 1936-37—

	Rs.	A.	P.
(i) Leases and concessions . . .	937	8	0
(ii) Lands	1,01,819	8	6
(iii) Buildings	4,02,668	14	7
(iv) Plant and Machinery . .	9,48,938	1	5
(v) Other assets	...		

	1935-36.			1936-37.
74. Depreciation . . .	59,924	1	9	70,000
75. Reserve Fund . . .	1,50,000	0	0	Balance Sheet not yet prepared.

76. Dividends, 1935-36—

Preferred	8 per cent.
Ordinary	8 ,,
Deferred	...

77. The working capital is provided by deposits made by the Directors and their friends and also loans on pronote or secured by papers. The deposit and borrowing rate varies between 5 to 6 per cent.

78. Our Managing Director gets 7½ per cent. on net profits of the Company before allowing for depression or reserve.

79. After providing for depreciation and improvements, a return of 10 per cent. is quite fair. The interest rate of Debentures in our case is 7 per cent. and Preference Shares carry a dividend of 8 per cent.

80. Our Factory has worked two seasons. We calculate cost of manufacture on a maund of cane. In the 1st year it was As. 2-6 per maund of cane crushed and in the 2nd year it is As. 2-3 per maund of cane, no provision having made for depreciation in these calculations. The recovery is dependent upon the quality of cane. Conditions in our District have been greatly varying and we do not think any improvement can be relied upon.

81. Our plant has not been extended. We have only enlarged our Boiler sugar through one organization on lines similar to NIVAS in Java and we expect another reduction so as to reduce our fuel bill to one-third of what it was 2 years ago. The superior skilled staff is being Indianised which also will reduce the expenses by Rs. 1,000 a month.

82. Reduction in works cost is now possible only to a small extent by effecting economies in small items. On the other hand the cost of Mill stores has risen recently.

83. We have our selling agents at Cawnpore, Amritsar, Nagpur and Bombay.

84. (*a*) We sell sugar through sole agents and our sole agents have their sub-agents.

(*b*) Retailers make their purchases through brokers.

85. Yes the present contract form is suitable. As a result of recent Conference between the Representatives of the Sugar Mills Association and the Merchants Association, an approved form of contract has been drawn up.

86. Detailed information is not available.

87. The whole sale prices and retail prices usually do not fluctuate widely except the fact that retail prices always follow a convenient basis of quotation like 5 seers or 5½ seers a rupee and 5⅛ seers or 5⅜ seers a rupee.

88. The storage arrangements of big dealers in important markets are quite satisfactory. Pucca godowns with brick or concrete flooring being used.

The smaller dealers carry their stocks in their shops and since it is seldom larger than a month's supply the deterioration during this time even under unfavourable circumstances is not appreciable.

89. A good quality Indian sugar will keep as good as Java sugar. Only sugars of very fine and soft grain and of lower purities deteriorate during the monsoon. Sugar Mills are very alive to his question and in view of the discrimination in the market for good and bad qualities, they are fast developing large and medium grain sugar of uniform standard.

90. There is no preference for any particular country. In large cities and among Europeans and rich Indians they prefer a white and evenly granulated sugar, and since Indian sugar quality for quality is available cheaper than Java sugar by nearly Re. 1 per maund usually the Indian sugar is preferred. At ports where difference is sometimes narrower, Java sugar also finds preference.

91. Good Indian sugars compare quite favourably with Java sugar. In India there is a marked preference for bold grain whereas Java sugar has a medium and bold grain irregularly assorted. Some of the Indian sugars still require improvement in colour and regularity of grain.

92. When the production of Indian sugar used to be less than the annual consumption the dealers used to enter into forward contracts for delivery during summer months. When due to the seasonal increase of demand they were able to sell their holdings at profit. Since the last 3 years the dealers made forward purchases, but owing to over production and consequent selling pressure of the Mills, the prices continued to decline. The dealers sustained heavy loses and except speculators stopped forward purchases. So whereas 3 years ago, most of the Mills used to liquidate their stocks by the month of May, nearly 3 to 4 months supply used to pass into the hands of the dealers. Now the dealers purchase their day to day requirements holding stocks enough for about a month. The Mills carry ½ to ⅜ of their output at the close of their working season and liquidate it gradually. The better Mills succeed in disposing of their stocks completely whereas the backward mills carry forward nearly ⅒ of their stocks to next year.

The Mills usually arrange loans on the security of sugar at a margin varying from 20 to 30 per cent. The price calculated for valuation purposes is the market price less Excise Duty. The rate of interest varies from 4½ to 6 per cent.

93. Yes. It will make available information whether the distribution of Indian sugar is in accordance with the Geographical position of the Mills, quantity consumed in each market, the marketing expenses, and the extent to which it is possible to establish direct contract with the consumer.

94. Yes. The efforts done by the Sugar Mills Association and other people to form an all-India Marketing organisation have brought out the fact that such an organisation though acknowledged to be necessary does not receive full and unanimous support if the organisation be a voluntary body.

It is therefore essential that by legislation or by some other Government measure it should be made compulsory for the Sugar Mills to market their sugar through one organization on lines similar to NIVAS in Java.

95. The standardization of sugar will facilitate organized marketing. The Director of the Imperial Institute of Sugar Technology maintains certain standards, which we suggest be scrutinized by a mixed Committee composed of the Representatives of Sugar Mills Association and Sugar Merchants Association and the approved standards be caused by the Government to be kept at the important marketing centres, *viz.*, Cawnpore, Bombay, Calcutta, Karachi, Amritsar and Delhi, etc. The Mills be asked to give the standard number against each offer or sale and for a transitory period be allowed to add their present quality designation. In due course the trade will be able to make use of the standards more extensively. This will also encourage production of uniform quality of sugar.

As regards the basis of standardization there are three factors, which determine the quality of sugar in order of importance, colour, size of crystal and lustre. The gradations adopted by the Director of Imperial Institute of Sugar Technology may be used with slight modifications if necessary.

96. (*a*) We are not aware if any business has been done on the basis of the standards prescribed by the Director of Imperial Institute of Sugar Technology.

(*b*) Ditto.

97. The approved set of standards should be made available for sale at lower charges to popularise them.

98. Until the sugar produced conforms to certain approved standards and the marketing organisation is developed on right line, the establishment of futures or terminal market, while not being immediately useful will only bring in pure speculators.

99. We have no data to make an estimate but the annual consumption of figures is stated to be 1,100,000 tons. Its cheap price should increase the consumption, but speedily falling rates have tended to make the wholesale and retail dealers panicky and nervous. They do not have now any enterprise or resources left to extend the marketing facilities. In view of the fact that the present level of prices do not cover even the cost of manufacture and excise under normal conditions, the future tendency in the event of marketing organization being set up will be for prices to rise. The consumption might increase gradually if the prices remain steady, the quality of sugar becomes more and more uniform, the methods of distribution become scientific and transportation and marketing expenses are deduced to a minimum.

Publicity and advertisement to encourage the consumption of sugar can be helpful provided it is followed up by a net work of centrally controlled distribution agencies.

100. In the recent years such class of confectioners as used to cater for poorer classes are increasingly making use of sugar. A few years ago when the sugar used to cost Rs. 10 per maund to a village confectioner, more than half of his sweets used to be made from gur, but now the position is reversed. It must, however, be remembered that sweetening elements whether it be gur or sugar are nearly half the weight of the confectionery and therefore the price of sweetening elements has an important bearing on the price of sweetmeat or confectionery. The price of sugar in a small town or village is nearly 3 times that of gur or jaggery and the difference must narrow down considerably to enable the displacement of jaggery by sugar to a large extent.

101. There are great possibilities. Sweets so far have not been attempted to be manufactured on a large scale. That made in the bazars whether in big towns or villages is generally made with an eye on cheapness, contains ingredients to no fixed proportions, has no keeping qualities and is invariably considered everywhere as inferior to home product. If sweets were scientifically made, packed in newly introduced airtight cartoons or tins, if the railway were made to realise that sweets are heavier than the biscuits

therefore deserving of low transport charges, cheap confectionery can become immensely popular in India.

Syrups are quite popular in India and except the fact that if their manufacture were in the hands of people trained to modern methods, thus enabling production of finer and superior syrups, any increase in the consumption of sugar is dependent on the price factor.

Quite a large quantity of sugar can be used in the fruit canning and fruit preservation industries. The former industry is almost unknown in India. California, Java and Australia have made big strides. There are scores of fruits in India, which if properly canned will not only command home markets but can be exported as well. Fruit preservation is carried on in various parts of India on small scale, but their products are getting into disfavour on account of too much sweetening and the methods employed being so antique that the preserved fruit almost looses its distinguishing taste. As both the industries are capable of being carried on small scale, the Government should establish demonstration or experimental works, and if the products of the manufacturers are of a certain set standards they should get a certain subsidy from the Government on the basis of a small percentage on sales.

102. Data on this question is being collected and the answer will follow shortly.

103. The fact that the Java sugar was landed in India at unremunerative rates will be borne out by the following c.i.f. Calcutta rates of Java sugar :—

Date.	Price in Indian Currency per maunds.		
	Rs.	A.	P.
1933—			
January to March	3	12	2
April	3	12	5¾
May	3	10	7
June	3	13	6
July	3	13	0
August and September	3	11	6
October	3	10	6½
November	3	9	1¼
December	3	4	1
1934—			
January	3	1	8
February	3	6	1
March and April 1st to 24th	3	5	1
April 25th to 3rd May	3	3	1½
May 4th to 10th	3	1	9
May 11th to 28th	3	1	3¾
May 29th to 21st June	2	15	4½
July 9th to 16th	2	15	10¼
July 17th to 30th	3	0	9¾
July 31st to 9th August	3	0	4
August 10th to 20th	3	1	3¼
August 21st to 26th September	3	0	4
September 27th to 6th October	2	13	4¾
October 7th to 10th	2	12	1
October 11th to 27th	2	13	4¾
October 29th	2	11	6
November 13th	2	9	9
November 14th	2	9	3

Java manufacturers had accumulated large stocks and the industry was in its worst plight. The rate on November 14th was Rs. 2-9-3 per maund which includes railway freight and port expenses in Java and steamer freight and insurance. This is pure dumping resorted to for the purposes of competing unfairly with the Indian sugar.

104. Exports figure are given below in tons:—

	By sea.	By land.
1930-31	493	40,126
1931-32	226	28,885
1932-33	437	27,729
1933-34	425	33,110
1934-35	363	34,034
1935-36	389	25,836
1936-37	521	23,381

In the recent World Sugar Conference Dr. Meek agreed on behalf of Government of India not to export any sugar except Burmah. This was done when the industry was clamouring for export facilities and even the Government appear to have been stupified by the agreement which is without consideration.

Two conditions are essential to make export feasible firstly Indian sugar should be admitted in the United Kingdom at certified colonial rates and secondly the Government should grant an export bounty for sugar equal to the difference on f.o.r. Mill and c.i.f. Port of entry terms.

105. The imposition of the Excise Duty of Rs. 1-5 per cwt. in 1934 was at a time when the production was well below the total consumption. The working season had almost finished and the incidence of the excise was to a major extent transferred to the consumer.

The gur refineries which were already feeling the competition of the cane sugar factories found this duty unbearable and most of them in Punjab and United Provinces closed down within the next 2 years.

The new addition of Excise Duty at annas 8 per cwt. affected the industry under quite different circumstances. Over-production of sugar and consequent internal competition has already brought about a reduction of nearly 40 per cent. in price from the 1934 pre-duty level. The profits of the factories in February, 1937, were hardly Re. 1 per bag, all of which the additional Excise Duty swept away. Owing to heavy selling pressure the feeble efforts to increase the price equal to the imposition of additional excise were unsuccessful and within a few days the prices returned to pre-duty level inclusive of the new duty. If the sugarcane prices had not been reduced below annas 4 which the Government did until it reached annas 3 per maund the sugar factories would have closed down much earlier.

106. By far the most important purchaser of molasses are distilleries which are mostly situated on the broad gauge railway a small part is sold locally or in the neighbouring markets. Since the last 3 years one European Company is exporting molasses through Calcutta. It usually purchases molasses at a nominal rate of 6 pies or 1 anna per maund and such of the sugar mills which have no arrangements with the distilleries or sometimes ready to get rid of molasses even if taken gratis.

107. The following table gives the detail of export of molasses from India:—

—	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Aden and Dependencies.	13	12	11	13	..	..	..
United Kingdom .	..	..	7	179	153	..	13,622
Ceylon . .	390	658	707	890	890	925	923
Union of South Africa.	13	..	9	14	..	..	9,500
Zanzibar and Pemba	14	15	17	17	..	..	..
Other British Possessions.	13	21	13	19	..	..	..
Other Countries .	..	..	..	..	110	101	140

Since it is available at practically no price the only determining factor is the transport cost to the port. If adequate number of tank wagons for metre and broad gauge were available and the molasses from metre gauge to broad gauge can be transhipped by means of a pump installed at a suitable junction station, the port price of the molasses would be cheap enough to encourage export.

108. The measure of protection enjoyed by the industry has been fully effective is illustrated by Indian becoming self-sufficing in her sugar requirements within a period of about 6 years.

109. After deducting the excise duty of Rs. 2 per cwt. the net protection new enjoyed by the industry is Rs. 7-4 per cwt. which we suggest should continue for another 7 years. The sugarcane has not improved qualitatively to any appreciable extent as composed to Hawaii or Java P.O.J. canes. Owing to the low sucrose yield of the same the cost of manufacture of sugar is nearly 50 per cent. higher than Java. To standardise and improve the present quality which in good many cases is markedly inferior to Java standard will also take time. To afford adequate protection to the present grade Indian sugar at the ports after allowing a reasonable margin of profits and at prices controlled by a central marketing organisation, it is necessary to continue protection at the present scale.

110. Besides the present level of protective duty we suggest the following forms of assistance by the Government:—

I. By encouraging research work and development scheme for the introduction of sugarcane varieties as high yielding as P.O.J. cane and of such characteristics as would enable the prolongation of working season to at least 7 months.

II. Providing suitable facilities (*a*) for training of the personnel, (*b*) for carrying on research in sugar technology and guiding and assisting the industry on the same lines as Java experimental station at Pasroswan, and (*c*) Organising Research and experimental work for the utilisation of the by-products of the industry.

III. Creating or actively assisting in the creation of a central body on the lines of NIVAS, having statutory authority to allot quotas for the production of sugar to each factory and restricting the erection of new factories or extension of present factory by means of licenses. The marketing organisation should also be under the control of this body.

IV. Taking adequate fiscal measures to enable the industry to stand a fair chance in competition with foreign sugar and entering into trade agreement with foreign Governments for the export of sugar and molasses.

III. The following statement shows molasses produced in India and molasses imported into India in the last six years:—

	Indian Production.	Imports into India.
	Tons.	Tons.
1930-31	269,000	102,204
1931-32	365,809	40,191
1932-33	461,658	31,991
1933-34	430,000	2,401
1934-35	406,000	415
1935-36	494,000	*Nil.*

It is the increase of Indian production that affected imports of molasses, and not the duty. No Indian industry has suffered as molasses are available at nominal prices in India itself.

The Oudh Sugar Mills, Ltd., Sitapur.

Replies to Tariff Board Questionnaire.

1. Our factory began the manufacture of sugar in the season 1933-34. Its present capacity is 1,600 tons cane per day.

2. The output of the factory has been as follows:—

Season.	Maunds.
1933-34	193,355
1934-35	303,075
1935-36	520,809
1936-37	424,169

3. Our factory is at a disadvantage in respect of (*a*) and (*b*).

(*a*) The available gate cane is insufficient, and freight on lime, fuel, etc., is heavy.

(*b*) The condition of roads is very bad and hence transport of gate cane is very difficult and irregular. Period allowed for loading and unloading of cane wagons require to be increased and timings should be altered to suit requirements. Shortage of wagon supply is a constant difficulty.

4. Our process of manufacture is sulphitation.

5. The following amounts have been spent by way of extensions of plant or replacement of machinery:—

Out of the amounts shown for additions in the balance sheet during 1933-34, about Rs. 3,00,000 represent extention.

	Rs.	A.	P.
1934-35	4,70,631	0	0
1935-36	2,25,471	1	7

Accounts for 1936-37 are not yet ready.

6. Excepting some extensions made during 1936-37 no further extensions are contemplated.

7. (*a*) The main determining factors are the quantity of suitable cane available at a gate and the period for which it is available.

(*b*) Under present conditions small factories are more advantageously situated in this respect, as they are in a position to obtain sufficient supply of fresh cane at gate, with consequent saving of Railway freights and higher recovery.

8. Simple parts such as cast iron pipes and tanks, etc., comparatively easy to manufacture are obtainable in India. Sugar machinery being a specialised manufacture all machinery and important parts have to be imported.

9. The Imperial Institute of Sugar Technology should have sufficient staff of Technical experts to be in a position to render more and prompt assistance.

10. We are unable to obtain on reasonable terms land in the neighbourhood of the factory.

12. This year we have started a small farm of about 30 acres for experimental and seed distribution purposes.

13. No special experiments made by us.

The Agricultural Department has inaugurated a cane development scheme which commenced operation in our area in March last year. We have contributed for encouragement of this scheme.

14. (*a*) Practically no very marked change.

(In the year 1936-37 due to excess rains a large quantity of cane was water-logged, development was stunted and hence available cane much less than required.)

Area under cultivation this year gone down due to anti-propaganda.

(*b*) Not appreciable.

15. About 10 per cent.

16. The factory is not assured of a sufficient supply of suitable cane. Principal varieties of cane crushed in our factory are Co. 213 and Co. 210.

The field yield is about 300 maunds per acre and the average sucrose about 12 per cent.

17. If at the end of any season supply runs short competition starts. Its effect in price varies according to the circumstances but generally up to 2 annas to 3 annas higher have to be paid. Such competition is, however, very harmful.

18. (*a*) Yes.

(*b*) The variations are due to climatic conditions price of cane, price of Gur, Khandsari sugar and price obtainable for alternate cash crop.

19. The production of sugarcane in our gate area falls short of our requirements. As we require more cane at gate the question of any restriction does not arise in our area.

20. The approximate cost per acre is estimated at Rs. 55 to Rs. 60 including cartage. With an outturn of about 300 maunds per acre.

21. Absence of good roads is a very great handicap. The road difficulty requires to be promptly remedied by the Local Boards.

22. (*a*) We are not in favour of compulsory acquisition or leasing of land which should be left to voluntary negotiations.

(*b*) With a view to remove uneconomic and harmful competition for cane and to establish more intimate and mutually benefitial personal relations between the factory and the cultivators it is desirable to introduce a system of zoning, with due regards to the requirements of individual factories each of which should thus be enabled to get its full requirements at gate.

23. The development and proper maintenance of feeder roads is a legitimate function of Local Boards. As regards advances of cash or supply of seed and manure if a zone system is introduced we shall be glad to help the cultivators, by advancing seed, manure, etc.

24. (*a*) We are in favour of fixing a quota but do not consider its necessity to have arisen as yet.

(*b*) The erection of all new factories and extensions of existing factories should be made subject to License. The Licensing should be entrusted not to Provinces but to an All-India Body.

The proportions of gate and rail cane vary from year to year.

Year (Season).	Gate cane. Per cent.	Rail cane. Per cent.
1933-34	51	49
1934-35	46	54
1935-36	40	60
1936-37	47	53

We have no tramway communications in our area.

26. Our gate cane is transported by carts. The average weight of cane carried per cart is about 22 maunds. We had experimented with one pneumatic tyred cart for demonstration purposes but unsatisfactory condition of roads would not permit the use of heavy loads.

27. The mileage of roads in our areas is inadequate and the condition of main and feeder roads is very bad.

28. Cane is brought by road from about 6 to 7 miles (a small quantity from about 14 miles). The average time taken between cutting and delivery at factory of gate cane is approximately 20 to 22 hours. No protection is provided against deterioration during road transport.

29. The average cost of transport of cane by cart is about 9 pies per maund for a distance of 6 to 7 miles. The cost does not vary exactly in proportion to mileage. Most of the growers employ their own carts while some have to hire them. The average cost of hiring is about 9 pies per maund.

30. No.

31. We have sufficient weighbridges which are is continuous use. The normal detention of a cart at our factory is about four to five hours. Number of weighbridges has been increased space for parking of carts has been extended and proper tracks have been provided for speedy regulation of the carts.

32. Our rail cane is normally transported from a distance up to 60 miles. The average time taken between cutting of cane and delivery at factory is about 48 hours. Sometimes on account of short supply of wagons cane is left out at loading stations thus incurring driage. The railway arrangements for loading and transport of cane are not satisfactory. The time allowed for loading and unloading of wagons should be extended and the rules regarding demurrage should be relaxed in cases of crushing stoppages owing to breakdowns.

33. Railway freight is calculated on the basis of wagon rates (each wagon is estimated to have a carrying capacity of 327 maunds). We have always felt the impossibility of loading any wagon to anything near that. The actual load is much less. Rohilkhand and Kumaon Railway freight basis requires to be reduced. We consider that a maundage rate per mile so devised, however, that the rate applicable to the maximum zone distance does not exceed the present flat rate would be more advantageous.

34. The rates of freight on lime, sulphur, fuel and manure should be reasonably reduced.

35. There is no tramway line in our area.

36. We consider a tramway system to be generally advantageous. There would be no special difficulties in laying out a tramway system.

37. Delay in delivery results in much deterioration, the extent of which varies according to weather.

38. All from cane-growers direct (*vide* 41).

39. The cultivators executes sattas for the supply of cane. In some cases we provide seed and manure as necessary.

41. For the last two years, a part of our Rail cane is obtained through Co-operative Societies, which are paid a commission by us at the rate of 12 annas per 100 maunds of cane arranged through them.

42. We have weighbridges for weighing carts together with bullocks for weighing gate cane. The rail cane is weighed over a separate Railway weighbridge. At each of the stations from which we draw rail cane, one weighbridge is provided.

Payment is made immediately after delivery of cane.

		As.	P.	
43.	1933-34	4	7½	excluding freight and loading.
	1934-35	5	3	,, ,, ,,
	1935-36	5	1	,, ,, ,,
	1936-37	4	5	,, ,, ,,

At the end of any season when owing to short supply competition starts, prices tend to rise. Presently the prices are regulated by Government.

The prices of cane are regulated by Government.

In case of supplies being found insufficient at the end of any season competition starts and prices much higher than the then prevailing minimum are paid.

45. The price of gur and Khandsari sugar have a great influence on the supply and price of cane in our area

46. Yes, variations depend upon demand and supply.

47. Owing to available supply being short at the end of the seasons 1933-34, 1934-35 we have had to pay about 2 to 3 annas higher due to competition.

48. We consider the present system of fixing minimum prices as unsatisfactory. It creates a very uncertain and viscious circle. We would suggest that the minimum price be disconnected from the price of sugar and that one minimum (at or about 4 annas) be made applicable for the whole season.

49. The question of 'Bonus' payments for superior early and late varieties should be left for settlement between the factories and growers, by mutual arrangements in each case. In their own interests the Factories will be inclined to give such bonus. If, however, 'Bonus' is fixed by legislation it would be very difficult to work properly and a compulsory bonus may give scope for malpractices.

50. The duration of the crushing season has been as under:—

1933-34 . .	29th November, 1933 to 27th May, 1934.
1934-35 . .	1st December, 1934 to 22nd April, 1935.
1935-36 . .	21st November, 1935 to 28th May, 1936.
1936-37 . .	26th November, 1936 to 21st April, 1937.

The variations are due to cane supply. For economical working longer seasons are desirable. Longer seasons would, however, result in increased production for which an outlet by way of export to foreign countries is necessary to be provided.

51. Introduction of early and late varieties would not be necessary until consumption of sugar increases or export is permitted.

52. The Agricultural Department should increase its activities in connection with efforts for improvement in yield and quality of cane.

53. Factory labour (skilled and unskilled) during crushing season about 1,250. Silent season about 300.

54. Chief Chemist, Chief Engineer, and some Panmen were also imported from abroad. Skilled labour is partly recruited from other provinces as and when necessary.

55. The Panmen imported from abroad have been replaced by Indian Panmen.

56. We provide free quarters, fresh tube well water and a free dispensary with accommodation for in-patients.

57. The following amounts were spent for fuel:—

Season.	Amount.
	Rs.
1933-34	26,232
1934-35	33,138
1935-36	18,482
1936-37	28,233

We have so far not had surplus bagasse. We have, however, installed a bale-press.

58. Bagasse, molasses and press cakes.

Season.	Molasses made.	Price per maunds.		
	Maunds.	As.	P.	
1933-34	90,803	1	0	
1934-35	130,353	0	9	
1935-36	234,714	0	9	
1936-37	161,297	0	6	at the beginning of season; laterly practically no value.

Outturn depends chiefly upon the quality of cane. The price depends upon demand and railway freight.

60. In the beginning we were selling in small quantities to petty contractors. In 1935-36, the Indian Molasses Co. purchased a lot for export. But since last year there is practically no market for this commodity. Freight to Sonepur where Indian Molasses Co.'s depôt is situated 3 annas 6 pies per maund.

The only suggestion we can offer is its conversion into power alcohol.

61. If the Indian Molasses Co., Ltd., do not buy the molasses their disposal would be a difficult problem.

The Indian Sugar Mills Association has repeatedly dealt with this matter and we consider that the remedial measures should not be delayed any further.

We have a baling press but no surplus bagasse at the end of the season.

	Season.	Stock at beginning.	Stock at end.
		Maunds.	Maunds.
64.	1933-34	...	108,238
	1934-35	...	123,448
	1935-36	6,345	284,217
	1936-37	122	164,000

65. We keep our sugar in pucca godowns. Storage capacity (including the extension now being made) about 125,000 bags.

66. About 5 per cent. of the sugar deteriorates or suffers damage in storage, mostly due to atmospheric influence and heavy rains.

67. Such sugar as requires reconditioning is reconditioned in the following season while the rest is sold outright at some lower price.

69. Complaints are sometimes received of damage to sugar in rail transit. This may be due to improper arrangements at transhipment stations.

70. We do not get sufficient wagons for sugar transport and are put to heavy loss owing to delay in delivery of sugar to the markets. Shortage of wagon supply is a standing difficulty which requires to be removed as early as possible.

71. The free period allowed at destination stations for taking delivery requires to be lengthened and the scale of demurrage charges requires to be satisfactorily reduced.

		Rs.	A.		Rs.	A.
72.	1933-34	9	11	to	8	0
	1934-35	9	6	to	8	2
	1935-36	9	3	to	7	5
	1936-37	7	6	to	5	12

73. Copies of 3 balance sheets are enclosed herewith.

		Depreciation provided. Rs.	Allowed by Income-tax authorities. Rs.
74.	1933-34	80,000	93,795
	1934-35	1,25,000	1,20,137
	1935-36	1,30,000	Not yet decided.

75. Amounts set aside for Reserve (against Debentures)—

	Rs.
1933-34	95,000
1934-35	25,000
1935-36	3,00,000

76. Amounts distributed as dividends—

	Rs.
1933-34	61,469
1934-35	59,892
1935-36	89,838

77. At an average rate of interest about 5 per cent. Working capital is lent by the Managing Agents. A cash credit account against stocks is arranged with a Bank.

78. Head office expenses about Rs. 6,000 per annum. The Managing Agents were paid the following amounts as commission:—

	Rs.	A.	P.
1933-34	56,509	8	0
1934-35	65,331	10	3
1935-36	1,15,318	13	9

The Managing Agents receive 1¼ per cent. on sales and 10 per cent. on profits.

79. 10 per cent. on the total gross block.

83. Our principal marketing centres are Punjab, Gujrat, Bombay, Central India and partly (United Provinces).

84. The sugar is sold through commission agents to dealers.

85. We consider the latest contract form recently adopted by the Indian Sugar Mills Association to be suitable one.

89-91. Best quality Indian sugar is as good as imported sugar. Java sugar is preferred in hotels and restaurants run in the European style for

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their customers, Europeans and Europeanised Indians. But even here high grade Indian sugars are replacing Java sugar.

93-95. Yes.

96. (*a*) *Nil.*

(*b*) Yes, for classification of output.

97. A material reduction in the price of the standards is essential.

98. " Futures " or " Terminal " markets if established at Calcutta, Bombay and Cawnpore are likely to prove very advantageous to the interests of all concerned.

99. About 1,100,000 tons, continuance of cheap price accompanied by good propaganda should not fail to achieve in course of time a substantial increase in consumption. More uses of sugar should be found by encouraging subsidiary industries such as sweets, syrups, etc.

100. Unable to estimate the extent. While for certain sweets gur is still preferred, the substitution of sugar for gur has gone for in the sweetmeat trade.

103. Yes.

104. Facilities should be given for export of Indian sugar to the United Kingdom by admitting it at certified economical rates.

105. The excise duties have placed a premature burden on the Sugar Industry, as well as the consumers, while the growers have suffered on account of consequent reduction in cane prices.

106. Conspicuous by their absence.

108. The measure of protection has been justified as will be found from the increase in the number of new factories, reduction in the quantity of sugar imported, increase in the Indian production of sugar and consequent decline in the price of sugar, benefiting the consumers. Growers of cane and labour (skilled and unskilled) have also benefitted.

109. The present extent of protection requires to be continued throughout the remaining period.

110. Permission for and encouragement to the exports of Indian sugar. Development and maintenance of good roads. Utilisation of molasses. Establishment of an organization for increasing yield and quality of cane.

111. No Indian Industry has suffered as molasses are available at nominal cost in India.

Lakhmiji Sugar Mills Co., Ltd., Sitapur.

1. This factory started working in 1932-33. Its crushing capacity at the start was 300 tons, now it is 1,000 to 1,200 tons.

2. *Output of sugar*—

	Maunds.
1932-33	57,135
1933-34	128,957
1934-35	168,826
1935-36	236,985
1936-37	318,603

3. (*a*) It was advantageously situated when the plant was small. But it is not now so far as cane supply is concerned. The Limestone is not needed other important markets are far away.

(*b*) Facility of rail and road both are available, though the roads are not in good condition.

(*c*) Labour supply is sufficient.

4. *Double Sulphitation.*—Double Sulphitation Plants are cheaper to instal and working expenses are less comparatively than carbonitation plants. The clarification is not so good.

Carbonitation are costly and require more working expenses. The sugar produced is much whiter and quality is generally much better.

5. *Extensions and Changes in 1935.*—(*a*) Milling Plant 14 Rollers 26″ x 56″ complete.

(*b*) Two Babcock Wilcox Boilers of 5,000 heating surface each.

(*c*) One Triple 6,000 sq. ft. heating surface.

(*d*) One Quadruple of 18,000 sq. ft. heating surface.

(*e*) One Pan.

(*f*) One Vacuum Engine.

(*g*) Two Injection Heater Pumps.

(*h*) Four Filter Presses.

(*i*) Railway Siding.

Total cost Rs. 4,41,520-14-4.

Extension and Changes in 1936.—(*a*) Three Babcock Wilcox Boilers of 5,000 sq. ft. heating surface.

(*b*) Two door clarifiers.

(*c*) Three Juice Heaters.

(*d*) Four Juice Pumps.

(*e*) Four Pans.

(*f*) Eight Crystallizers.

(*g*) 28 Centrifugal Machines, 36″ x 18″.

(*h*) Two Sugar Dryers.

(*i*) One Vacuum Engine.

(*j*) One Spray Engine.

(*k*) Extension of Spray round pond.

(*l*) Four Filter Presses.

(*m*) One 100 k. Watt Electric Generator.

(*n*) One self supporting steel chimney.

(*o*) Two Magma Pumps with Magma Mixers.

(*p*) Two Hydraulic Pumps to drive Centrifugals.

(*q*) Three Engines to drive Centrifugals, Crystallizers, Air Compressor, Sulphitation Stirrers and Lime Pump.

The layout of the entire plant was changed to suit the erection of extended machinery.

Total cost Rs. 7,61,597-13-8.

Railway Siding about Rs. 20,000.

Buildings—

New Mill House.
Three Sugar Godowns.
Sugar Dryer House.
Laboratory.
Chief Engineer's Office.
Cane Office.
Managing Director's House.
Pan House.
Staff and Labour Quarters.
Extension of Cane Yard and Roads.
More Land was leased.

Total cost Rs. 4,10,912-10-3.

Cane Weighbridges.—Twenty—Rs. 20,000.

6. *Further Extensions and Replacements in Contemplation.*—(1) Four Rota Pumps to be installed instead of Magma Pumps.

(2) Grass Hopper conveyor to be extended.

(3) Cane Cutter Knife Engine of big Mill to be replaced.

(4) Roller to be re-shelled and repaired and replaced.

(5) Railway siding for Sugar to be extended.

	Rs.	A.
7. (*a*) Cost of cane 11 maunds at 9 per cent. Recovery .	3	2
Manufacturing Expenses	1	8
Excise Duty	1	8
	6	2

These are the expenses of a 1,000 ton plant. The average sale of sugar is Rs. 6-8 per maund. Thus leaving a profit of 6 annas per maund or 15 annas per bag.

(*b*) A 1,000 ton plant is an economic unit. Taking into consideration the working expenses, capital and cane supply.

8. Sugar Factory equipment is not available in India to any appreciable extent, only stores are available as imported from foreign countries.

9. (i) No appreciable assistance has up to this time been given to the industry on the whole.

(ii) Not at all.

(1) The money spent annually on the Institute? This may can be better utilized by rewards for original research work and scholarships to best students in sugar Technology in different Universities.

(2) The Director of the Institute should pay visit to the factories once in every working season and once in off season to advise the Mills on the troubles. He should spend reasonable time at every Mill to be able to give a comprehensive report and suggestions free of charge.

10. No. We have been trying our utmost to get land on lease and have experienced immense difficulties. The Oudh Tenancy is a great stumbling block. We cannot get the land vacated from the tenants and sub-tenants. The holdings of land are very small. Consolidation of holdings is not possible under the present law. Permission should be granted to construct water channels across Railway Line and Public Works Department and District Boards Roads whenever necessary. At present this permission is denied by the Departments concerned.

Means of transport such as Tramway along the Public Works Department and Canal Roads should be permitted to be laid and the land should be given free. The land at present is unused.

Right banks of canals should be open for rubber tyre vehicular traffic for transport of cane only.

Canal water should be charged at half the rates from the factory farm, to encourage cane farming for a period of at least 10 years and thereafter increase according to a graduated scale.

11. No.

12. (*a*) Two acres.

(*b*) No.

13. *Early Varieties.*—Co. 300, Co. 373 and Co. 350. Have been sown and differently treated.

Late Varieties.—Co. S. 5 and Co. 331. Have been sown and differently treated.

Medium.—Co. 370, Co. 421 and Co. 393.

Medium Varieties.—Have been sown and tested. No assistance given by the Department.

Manuring.—Potash Mixture prepared by Calcutta tried. Ammonium Sulphate of I. C. I. tried. Cow dung with Neem Cake tried. Press Mud and Molasses tried.

A mixture with Cow Dung Press Mud, Molasses and cane trash is under preparation and will be tried next season.

We have independently tried the following varieties and have controlled and differently treated certain areas with different sorts of manures and their sucrose contents tested and yield recorded. We have sown scientifically in forms as well as at random like ordinary growers. We also tested the sufficiency and insufficiency of water and also observed the results with stripped and unstripped cane of standing crop (leaves taken out).

Results.

14. (*a*) Quantity of cane—

	Maunds.
1932-33	388,201
1933-34	684,255
1934-35	901,635
1935-36	1,961,431
1936-37	1,487,112

Quality has improved continuously. In the first year 1932-33 there was plenty of Dessi Variety called Parra about 10 per cent. But gradually it was displaced by Co. 213 and in 1935-36 there was practically no Dessi Variety sown. Being total extinction, New Varieties have been introduced namely Co. 290 variety Co. 312 and Co. 313, by the Mills by distributing the seed among the growers. Co. 290 variety was already there to some extent in 1933-34.

It has determinated by this time and has been discouraged by the Mills outstations because its growth is zig zag. It cannot be loaded to the proper capacity of the trucks. It is susceptible to heat and dries soon.

Ratoon Crop.—Which was 20 per cent. available in 1932 is now reduced to about 7 per cent. or so. Thus more area is sown every year. In my opinion the ratoon crop is better than early varieties newly introduced as Mills could start crushing earlier as it had better sucrose contents. It has an adverse effect on the grower as the yield is low.

15. Luckily our area has so far been free from any disease or insect pest. But in year 1934-35 there was a slight attack of top borer and stinking rot towards the close of season in the month of April due to intensive heat. The damage done almost negligible.

16. In 1936 due to excessive rain there was too much water logging being low land and the proximity of a stream which assumed high dimension in rainy season. This stream got flooded and adversely affected about 25 per cent. of our cane supply at least. The result is that the Mill had to be stopped on 31st March, 1937, due to cane shortage, and 60 per cent. of the cane had to be bought from outstations at a much higher cost sometimes going up to 60 to 70 miles away.

17. The supply is influenced by the competition of other factories when several factories start purchasing at the same centre and are too closely situated to each other.

18. (*a*) The area under cane cultivation has constantly been increasing.

(*b*) (i) The excess of rainfall has a very adverse effect on the cane cultivation this year. The rivers flooded and wiped off most of the cane on both banks. The defect of rainfall too reduces development of cane.

(ii) If the price of sugar is high according to Cane Rules the Mills must pay high price to the cane-grower, which automatically increases the cane cultivation. If the price of sugar is low it is just the reverse.

(iii) Same as in the case of sugar but to a smaller extent.

(iv) This reduces cane cultivation just as in the case of wheat. The rise in the price of wheat has increased area under wheat cultivation and decreased under cane cultivation.

19. Peculiarly enough the cane this year has been less than our requirements. We had to close the factory on 31st March, 1937, for want of cane this year though normally in previous years we have been working till the end of May. Instead of restriction we on the other hand want encouragement for the cane cultivation in this area.

20. *Irrigated cost per maund of cane details per acre*—

	Rs.	A.
1. Zemindari rent for 1½ year as the crop takes 1½ year at Rs. 15 per acre	22	8
2. Ploughing at Rs. 1-8 per ploughing. One ploughing one man and 2 bullocks a day Rs. 1-8	12	0
3. Manuring 20 carts per acre Re. 1 per cart .	20	0
4. Seed 45 maunds 5 annas per maund . . .	14	1
5. Sowing charges 6 men 2 pairs bullocks . .	4	8
6. Hoeing charges at Re. 1 per hoeing 8 hoeings .	8	0
7. Carting charges 8 men	2	0
8. Irrigation charges	10	0
9. Watching charges	10	0
Total .	103	1

The yield per acre is estimated 400 maunds thus the cost of production of cane is annas 4 per maund.

Where there are no means of irrigation, the cost of cane will be higher about annas 5 per maund or on Kachha wells as the yield is low.

21. There are numerous difficulties in the way of cane-grower:—

(*a*) In the first place the Landlord is a great handicap in the way of cane-growers property. He increases the rent of the land whenever he finds that the grower has earned some money. This difficulty is felt in the case of sub-tenants and where there is Batai System (sharing the produce). Measures should be adapted to stop this system in the case of cane and the rent should not go beyond a miximum limit fixed by the Government.

(*b*) The rents must not be realised before the half of the crop is actually disposed off or some instalment plan may be adapted.

(c) More facilities should be granted by the irrigation department in the matter of adequate and timely water supply. Particularly the cleaning of Gul or water channels should be undertaken by the canal department instead of leaving it to the growers who for lack of co-operation among themselves leave the task half done. This is harmful both to the Department and cane-growers. If the Gul are properly constructed and maintained there will be less loss of water and more area will be irrigated bringing in more revenue. Thus enhanced expenditure will be more than off set.

(*d*) The transport of cane is a tedious problem. The land situated in the interior is inaccessible by road pucca or kachha. The cane carts from such areas must pass through somebodyelse's land who generally do not permit carts passing through their fields. Measures should be taken to press the Landlords to allow suitable kacha passages to cane carts. In several places there is a system of charging royalty for allowing cane carts to pass. Some time this amounts to one anna per cart. This must be abolished under Government Legislature.

(*e*) The condition of the District Board road is far from satisfactory. In the rainy days specially the kacha roads are rendered unpassable and the carts get broken. It is a real danger to the life of bullocks and the drivers in the cold season.

(*f*) There should be strong kacha bridges on the streams and ferries for a radius of at least ten miles around the mill.

(*g*) Mill authorities too should remove these difficulties in a more sympathetic manner than hithertofore, though much has been done since the introduction of cane rules. There are certain difficulties in joining the approach roads with Public Works Department or District Board roads which should be looked into.

(*h*) Suitable place for parking of carts well shaded by trees and sheds for the convenience of cane-growers should be provided at the mill gate. Que for the carts is absolutely necessary.

(*i*) Number of the weighbridges at mill gate should be sufficient to cope with the incoming loaded carts and releasing them within six hours at the most. Unloading facilities should be provided by the mills.

(*j*) More attention should be taken in the matter of prompt payment.

(*k*) Purchi system must compulsorily be adapted. No cart should be purchased without purchi (Indent).

(*l*) Cattle breeding centre should be started as the cattle breed has hopelessly degenerated and is not able to cope with the increase of cultivation and traffic.

22. (*a*) We do not know the basis on which the previous Tariff Board based their decision. But there should be no difficulty in obtaining land on reasonable terms in most factories. Individual cases can be considered on their merits. Real efforts on the part of the Government can secure land which is impressive.

(*b*) Zones system is desirable provided it is adhered to by all the mills and efforts are made by the mill to co-operate instead of compelling by legislature. The District or provincial authorities can do much to make zones a success.

23. If a zone system is adapted we are prepared to render assistance in the following directions:—

(1) Advances in the form of cash should be totally discouraged. We have tried this during the last five years. But this leads to unhealthy relations and is risky for both the millowners and the cultivator and is harmful to both. It tends to enhance the growers indebtedness.

(2) Yes, we are prepared to distribute as much seed as a cane-grower actually needs on the minimum Government price realising next year out of the crop or the same quantity of cane without any addition. This form of help is preferable.

(3) Yes, we are prepared to distribute the manure at the cost price and keep stock of the same in the mill stores. The mill is only prepared to undertake the arrangement and storage of the manure. A mixture of press mud, molasses and cow dung

and cane trash is prepared and is being distributed freely to recognized cane-growers.

(4) The development of feeder roads is the business of the Public Works Department or District Board to maintain. District Board is charging maximum circumstances and property tax from the mills and their staff. This amount should be spent for the development of feeder roads and small bridges, etc.

24. (*a*) Yes. We are strongly in favour of a quota to avoid over-production.

(*b*) No more factories should be put up unless there is a substantial increase in the consumption or sugar begins to be imported.

No further extensions in the milling plants be permitted. Boiling house extensions may be carried on if necessary for the sake of efficiency.

25. *Cane supply proportion*—

From 1932-35.

(*a*) 50 per cent. (*b*) 50 per cent.

	1933.	1934.	1935.	1936.	1937.
Gate . .	50	50	50	80	40
By rail .	50	50	50	20	60
Tramway .	...	...	...	...	...

In the first years the proportion has been half and half due to increase in the cane crop and extension in the milling plant. In 1936 the excess in the gate cane was due to exceptionally good crop and no appreciable extensions done in 1935. In 1937 huge extensions were carried on, the season started late and the local crop was very badly effected on account of floods due to excessive rain. Almost 25 per cent. of the area under cane cultivation was totally washed off. Due to scarcity of feeder about 10 per cent. of the cane crop was used as such.

26. The gate cane here is transported entirely by carts no lorries being used. Average cane per cart is 18 maunds approximately. It is possible to introduce rubber-tyre carts in this area. We have introduced about a dozen carts in this area, and have found that a rubber-tyre cart can easily carry about 65 maunds of cane. If the bullocks are strong and road is good it can carry up to 80 maunds.

27. The mileage is not adequate. The condition of the roads is hopelessly bad and feeder roads are not worth the same. There are no bridges over the ferries or stream which become unpassable during rains.

28. On an average the cane is brought over a distance ten miles though some carts come from 15 miles distance. The time it takes between cutting and reaching the factory is 24 hours. It is not protected at all.

29. The cost of transport per maund per mile is 1¼ pice at the most. The cane growers generally use their own carts. But in cases where they have to hire the charges are as follows:—

Within 2 miles 6 pies per maund.
Within 6 miles 9 pies per maund.
Within 8 miles 1 anna per maund.

30. Two pice per cart is charged by the Landlord as royalty which was up to 1934 deducted from the growers, but is now paid by the mill.

At Sitapore a tax of annas 4 per cart at Tilhar annas 2 per cart and at Misrikh annas 2 per cart is charged.

31. We get usually issue purchies (indents) for daily purchase and issue passes to big suppliers. The normal period of detention up to last season was about six hours. This year it has been reduced to nothing as we

were always in want of cane and weighed carts as soon as they arrived day and night. We have fixed for cart weighbridges on which the bullock and the cart are weighed together. It only takes about a minute per cart to weigh. The cart is unloaded by factory labour and is released at once.

32. The cane in transported to the factory on an average over a distance of 35 miles, by rail. The average time between cutting of cane and arrival in the factory is 36 hours usually. The railway arrangements are full of difficulties and are most unsatisfactory—

(*a*) Every year the plots allotted to mills in the railway premises for cane weighments are changed without assigning any reason on the recommendation of Junior Officer.

(*b*) Permission to build temporary huts of bricks is not granted.

(*c*) The plots in the railway yard are full of ditches and are otherwise uneven.

(*d*) Approach roads and feeder roads are hopelessly bad.

(*e*) Loading platforms are not provided at all stations.

(*f*) Allotment of wagons is most arbitrary and is generally in the hands of Station Masters. Serious difficulties when we do not get the requisitioned number of wagons. Imprest of some wagons is very necessary according to the loading of the station.

(*g*) The rate of the demurrage charged is exhorbitantly high and out of proportion to the railway freight charged, *i.e.*, one anna per hour per ton.

(*h*) The timings of the arrival of goods trains are most irregular.

(*i*) Corruption in the railway subordinate staff particularly Station Masters is rampart to a very high degree, and is in the knowledge of their superior Officers. This is due to laxity of rules and too much powers given to Station Masters which should be abandoned and the practice in vague should be made a rule, namely, loading after 17 hours and on Sunday is disallowed under rules but is done everywhere without any exception. This must be made a rule.

(*j*) Complaints of the millowners are very lightly treated.—Enquiries are generally conducted if at all through their immediate superiors who are already in league with them. The result of such enquiries is generally a foregone conclusion.

(*k*) The type of truck used for cane on East Indian Railway is unsuitable for cane traffic. They should be replaced by cage trucks, to avoid deterioration in transit.

(*l*) The theft of the cane by the menial railway staff is quite common.

33. The railway freight on East Indian Railway are calculated according to a graduated scale of distance taking 450 maunds as the average load of truck. Previously it was Rs. 7 over a distance of 30 miles up to 1935. It has since been increased to a minimum of Rs. 10 over a distance of 35 miles. The previous rate were more suitable.

No this would cause delay in transit at the weighing station and the tendency of the cane loaders will be not to load above the minimum prescribed, thus the earnings of the railway per truck will be lowered as greater number of trucks would then be required.

34. No. Of course if manures are transported cheaply. Their use will be encouraged.

35. No, tramways.

36. A tramway is advantageous as the transport is cheaper and more handy.

The tramway cannot be laid here as the securing of the land is a practical difficulty. Permission should be granted to lay the line along the District Board roads and the left bank of the canal.

37. This greatly varies with the season.

	Dec.—Jan.	Feb.—Mar.	Apl.—May.
	Per cent.	Per cent.	Per cent.
Road—			
Quantity	...	...	1
Quality	...	...	·5
Rail—			
Quantity	2	4	5
Quality	·5	·75	1

38. 85 per cent. from cane-grower.

15 per cent. through contractors or Agents.

39. (1) We survey the total area under cultivation in our vicinity in about eight miles radius and a list of cane-grower with their crop and it's approximate yield is prepared.

(2) We invite applications from the cultivators who are prepared to sell cane. Advances are made at the rate of Rs. 10 per acre according to the yield of crop for payment of revenue or other agricultural needs.

(3) Another advance of Rs. 5 per acre is made to meet water taxes, etc., in the beginning of the season.

(4) Improved varieties seed is freely distributed to any who are demanding it and is returnable at the end of crop at par.

(5) Manure is given on the cost price recoverable after the crop.

(6) Dunlop Pneumatic Tyre Carts are sold on actual cost on instalment basis spread over a period of 3 years.

(7) We start the season with big exhibition of cane and distribute prizes to good growers and regular suppliers. A well was constructed in the village for regular supplies. Dunlop cart given as a prize to the best individual grower with ploughs and agricultural implements.

40. About 85 per cent. of our cane is purchased direct. For 15 per cent. cane we appoint contractor only on out-stations. They enter into agreement for the regular supplies of cane and are paid commission at the rate of 1 per cent. Payments to the growers are made by the mill staff at every purchasing centre.

41. Not at present.

42. The cane is weighed day and night and payment is made at once. The normal interval between the delivery growers object to take payments at night for fear of theft for them special arrangements are made to receive money in the day time.

		As.	P.
43.	1932-33	4	7
	1933-34	4	9
	1934-35	6	6
	1935-36	5	4
	1936-37	4	9

Not now but previously they did increased at the end.

44. Yes. Minimum price is fixed according to the price of sugar.

45. Yes. There is a close relation, when the price of gur is low the price of sugar is also low. Gur is also a raw material for so many sugar refineries. With the levying of duty the refineries have been closed and this inter relation has to some extent been diminished.

With the cheapness of the gur the price of the cane falls down. Sometime it is strangely observed that the price of sugar remains stationery even though the price of gur and cane goes high. This is perhaps due to the fact that the Sugar Mills consume only 16 per cent. of the cane while the remaining 84 per cent. have to be turned into gur, etc. Or this may be due to internal competition of the sugar selling Agencies of the mills of some external influence governing the world sugar markets. The price of the gur depends upon natural causes namely the growth of cane.

46. In 1934-35 the price of gur/jaggery went high as there was an abrupt demand for gur from Kathiawar side.

47. Very seldom now.

48. The basis of the fixation of minimum price is not satisfactory as it does not provide for the sucrose content of the cane both in the beginning and in the end. This tend to shorten the period, of the working of the factories, with all its after-effects.

Our suggestion is that there should be no minimum price. The price of the cane should be left to be governed by the natural law of supply and demand rather than by any legislature interference. If it is at all deemed to regulate the cane prices, provision should be made to vary the price according to the variation in the sucrose contents. When a minimum price has been fixed it is but natural that a maximum should be fixed beyond which the cane-grower can not demand.

There is no statutory obligation on the part of the cane-grower to bring cane to the factory regularly specially at the time when the price of Jaggery goes high, while factory is bound to purchase the cane of any cultivator who brings his cart to the mill gate or purchasing centre without any delay.

49. In my opinion this system of bonus payment would serve to encourage the cultivation of superior, early, and late varieties of cane. But the main difficulty is that the price already fixed is too high. This should be reduced by 20 per cent. and should rise by a graduated scale of one pice per maund according to the quality of the cane early and late variety.

50. Duration of crushing season:—

1932-33, 1933-34, 1934-35, 1935-36 and 1936-37.

1936-37 period was not sufficient for economic working in our case. Periods in previous years have been alright.

51. There was a tremendous possibility at least to the extent of one month of extending the crushing season. But now it has been definitely marred by the imposition of increase in excise duty. It was on the other hand definitely reduced the possibility of even normal working of the factories.

52. Imperial Council of Agricultural Research can yet do much in finding out some use for the by-products of the sugar industry, such as molasses, bagasse and press mud. They have done some research work in this direction but the practical results have not yet reached the mills.

Except the cane control scheme the mills have not received any appreciable help from these departments. And even in this scheme the development portion is helpful to the industry while the supply and marketing portion of the scheme which will be governed by the Co-operative Department seems to be superflous. The co-operative staff in the scheme should be well replaced by the experienced staff of the Agricultural Department in the scheme so that more attention should be paid towards development than towards marketing. The marketing should be left to the cane-growers to arrange themselves with the mills. The contribution from the Government is too small.

Labour.

53. The following table shows the labour employed by this mill:—

	In season.	In Off Season.
Skilled	948	42
Unskilled	542	129

54. No labour is imported from abroad, skilled manufacturing labour comes from Bihar particularly Chhapra District and skilled mechanical labour from Punjab and United Provinces.

55. Does not arise.

56. Free furnished pucca quarters with electric and water fittings are supplied to all skilled workers and barracks for unskilled labourers.

A free dispensary recognized by the Government with a competent medical staff and a trained midwife is maintained by the mill.

Power.

57. Not so far.

Amount spent on fuel:—

	Rs.	A.	P.
1932-33	61,033	15	9
	(On account of gur.)		
1933-34	23,612	8	1
1934-35	24,638	8	0
1935-36	48,059	3	9
1936-37	29,403	13	6

We have to supplement by coal and firewood. The bagasse is not baled.

By-products.

58. *The by-products.*—(1) Molasses, (2) Press mud, (3) Bagasse, (4) Coal and bagasse cinders.

59. Outturn of molasses:—

	Molasses.	Price.		
	Mds.	Rs.	A.	P.
1932-33	25,551	1,459	12	0
1933-34	48,146	2,061	13	9
1934-35	71,786	6,848	14	9
1935-36	96,000	18,463	0	0
1936-37	125,000	12,500	0	0

It has continually increased due to increased crushing.

60. The market for the molasses is Calcutta, Assansol, Khulna. Tank wagons are provided by the East Indian Railway and the transportation facilities are adequate.

	As.	P.
1. Ramkrishnopur (Calcutta) Ultadanga . .	6	10
2. Assansol	5	2
3. Khulna	9	1

61. We have always been able to sell the entire product but at a very cheap rate.

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The utilization of molasses.—Various suggestions have been put forward to turn their huge by-product into some use. But none has yet yielded practical results. The manufacturer of Power Alcohol has been recommended by several eminent authorities. In this connection I cannot do better than to quote an article published in the *Statesman*, dated 24th May, 1937, on the subject.

I gather that an important decision regarding the use of molasses was reached at a recent meeting by the Sugar Committee of the Imperial Council of Agricultural Research. The committee came to the unanimous conclusion that molasses could be converted into power alcohol. It is proposed that to encourage such production, free licenses will be granted, subject only to the condition that such production of power alcohol will be liable to the same excise duty as is now levied on petrol.

It may be recalled that discussions in the Assembly had on many occasions urged this point of view on the Government and the argument has gathered special force in view of the fact that the sugar industry has not now the same margin of profit as in the past and must make the most economic use of all its by-products with a view to strengthening its financial footing.

According to the latest official report India's production of molasses is estimated at 494,000 tons during 1935-36 as against 406,000 tons in the previous year. The Sugar Committee's recommendation gathers strength from the fact that certain Dominions, such as Australia, encourage the production of such alcohol as a mixture with other power alcohol.

The Indian Sugar Industry Annual, 1936, page 67.

62. So far we had no surplus bagasse. It can be used in card board and paper industry.

63. Press mud can be used as manure.

64. Sugar stock—

Season.	Beginning.	End.	
		Mds.	Srs.
1932-33	*Nil*	10,495	0
1933-34	*Nil*	10,633	0
1934-35	*Nil*	45,038	24
1935-36	*Nil*	117,082	20
1936-37	*Nil*	163,737	20

65. We have our own spacious godowns for the storage of sugar which can accommodate about one lakh bags of sugar. We have added godown, the storage capacity of about 60,000 bags. No further expansions are yet in contemplation but it all depends upon the circumstances.

66. About 1 per cent. of the sugar in store during monsoon. This is due to dampness. It is due to inherent quality of sugar to absorb moisture.

67. It is sold at a lesser price by about As. 8 per maund.

69. It is due to leaky roof, defective railway wagons. Wagon get hot and the sugar sweals and becomes cake.

70. Yes, there are considerable difficulties particularly in the season of coal traffic and several times in the season of wheat traffic. It becomes difficult to get wagons from the railway. Delays do occur in the transit particularly at junctions of two railways and at transhipment stations. These must be avoided.

71. The type of wagons for sugar must be improved. They must be watertight and if possible airtight. There would be no chance of sugar swealing and forming cakes. This is particularly necessary in rainy season.

72. (1) There have been no sales in ports.

(2) Statement showing prices of products in up-country markets: This information will be supplied to you later on.

Freight to markets we supply—

	Rs.	A.	P.
Delhi	0	8	0
Ambala	0	10	10
Ludhiana	0	12	8
Jullundur	0	13	11
Amritsar	0	15	7
Lahore	1	0	8
Gujranwala	1	2	3
Rawalpindi	0	1	7
Bannu	1	14	2
Multan	1	6	11
Darya Khan	1	10	1
Peshawar Cantonment	1	10	10
Ajmer	0	14	3
Jaipur	0	11	9
Gujarkhan	1	5	10
Sialkote	1	2	6

Balance Sheet are enclosed herewith.

74. The following amounts have been written off as "Depreciation". Our rates of depreciation are the same as allowed by the Income-tax Department:—

	Rs.	A.	P.
1932-33	51,507	12	0
1933-34	43,028	6	9
1934-35	50,650	9	9
1935-36	1,28,962	15	0
1936-37	1,76,317	13	0

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75. No.

76. No dividends paid yet.

77. Our working capital has been borrowed from these sources:—

(1) From Banks against the security of stock of sugar 3½ per cent. per annum.

(2) From Banks against the security of building and machinery at 7 per cent. per annum.

(3) From private sources unsecured at 8 per cent. per annum.

78. We do not incur any expenses at our Head Office. The work there is carried on by the staff employed by the Chairman for his own business.

There are no Managing Agents.

79. 10 per cent. dividend is the fair return on capital in this industry.

Efficiency of production.

80. Form* enclosed.

83. Our principal sugar markets are:—

Delhi, Ambala, Ludhiana, Jullundur, Amritsar, Lahore, Gujranwala, Rawalpindi, Sialkote, Peshawar, Multan, Darya Khan, Saharanpur, Bareilly, Ajmer, Jodhpur.

84. (*a*) The usual arrangements between the mills and dealers are that we have appointed a firm as our sale selling Agents. They have branches in Cawnpore, Lahore, Amritsar, Jullundur, Dehra Ismail Khan, Karachi and Calcutta. They secure orders from the dealers and pass on to the mills both ready and forward. An advance of Re. 1 in forward sales is generally taken from the dealers, but not in all cases. The mills despatch the goods according to the Instructions of the Agents and collect their bills through the Banks. Agents are responsible for the timely retirement of the bills. They get a commission of 1 per cent. for their services.

(*b*) The arrangements between the dealers and retailers are that the retailers get two, three or more bags from the dealers, either a cash payment or on credit. Generally cash payment is insisted upon. If the credit is allowed the rate is increased by one or two annas per bag to cover interest at 6 per cent. and risk.

85. The amended contract form as amended by the Indian Sugar Mills' Association is quite suitable.

86. Shall follow later on.

87. It does not fluctuate widely. Only the difference is one anna per bag.

88. They have their own godowns in which sugar is stored. The sugar does not deteriorate for about a month in godown. After that the bags at the bottom begin to sweat and cake. In the rainy season particularly the sugar gets moist. About 1 per cent. of the sugar deteriorates in storage during rainy season only.

89. The Indian sugar deteriorates more rapidly than Java or imported sugar. There is improvement now in the keeping quality of the sugar since the introduction of seedling process.

90. Java sugar and imported sugar is preferred by certain high class people, who wants cubes. It is also used in big Hotel and Restaurants.

91 The Indian sugar is inferior to Java sugar in lusture. The crystals are not uniform nor big enough. Indian product is brittle. The Java sugar can withstand moisture better, and has better keeping quality. The quality of Java sugar is uniform all over while the product of the mills in India varies with each mill.

92. It is not possible to gauge the exact stock position between the mills and dealers. Generally mills carry about 70 per cent. of the stock and 30 per cent. are held by dealers. The Banks generally finance the stocks in the mills, and even with dealers. They generally advance 75 per cent. or 80 per cent. against the market value calculated after deducting excise duty. 25 or 20 per cent. is kept as margin for market fluctuations. The stock is kept insured up to full value. Deliveries are effected by the Bank Godown Keeper stationed in the mill for this purpose.

93. A marketing survey of the industry is most essential.

95. Yes, a central All-India Organization is absolutely necessary.

95. Yes, standardization of Indian sugar is quite essential. There is already a Bureau of sugar standard under the Director of Imperial Institute of Sugar Technology. It has not of course functioned properly so far, which it must be made to do. The standard may be fixed somewhat on the lines of Java standard. This work has been left entirely to the Director and he has prescribed standard on Java lines.

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* Not printed.

96. (*a*) No we have not done any business on these basis.

(*b*) No.

97. These standards must be adapted by all the mills.

98. The establishment of futures terminal markets does not appear to be advisable at this stage.

99. Normal annual consumption of sugar in India is about one million tons. With the cheap price the consumption is likely to go up.

Sugar is now cheap enough to reach the villages particularly the cane-growers. At every Mill there should be shop where sugar should be available in retail. The cane-growers who come in hundred and thousand daily to sell cane should be induced to purchase sugar at the shop at the wholesale rates. In this way they will start consuming and the consumption can go up considerably.

The Director of Institute should kindly adapt means to popularize the use of Indian sugar by advertisements, exhibitions and by means of propaganda.

The Indian Sugar Mills' Association has started press advertisement. This should be on a larger scale in vernacular papers and such other papers as reach the masses.

100. In the sweetmeat market the factory sugar has displaced gur to a large extent in the cities. Only account 10 per cent. gur is now used. But gur has inherent beneficial qualities and its own peculiar taste. There is class of people even in high society who still stick to gur as an article of daily consumtpion.

101. No.

102 & 103. Shall follow later on.

104. (*a*) About 26,000 tons in 1935-36 and about 24,000 tons this season.

(*b*) But the production of sugar has exceeded consumption and last year there was an estimated surplus of about 60,000 tons. This year this surplus may be even more. The disposal of the surplus has become a problem before the country. Efforts have been made by the mills individually and the Indian Sugar Mills' Association on behalf of the industry, to approach the Government of India with the request that the Indian sugar should be treated by Great Britain and as certified colonial sugar or even better. Great Britain imported 2,205,900 tons of raw sugar in 1936. Out of this 1,060,322 tons came from British Empire, while 1,145,578 tons from Cuba, San Domingo, Peru, Brazil, etc. It is hereby suggested that the Board should kindly recommend it to the Government of India in this respect to approach the Government of Great Britain. India has for centuries been an almost exclusive market for all sorts of goods manufactured in Great Britain and other countries of British Empire. It is perhaps for the first time in the history of Industrial Development of India that sugar an article of daily consumption has been produced by this country little beyond its usual home consumption. Great Britain and other member of the British Empire should come forward to absorb this little surplus on the same terms as they would get from others. The trade agreement with Great Britain is about to be concluded. It would be better to give this proposal a practical shape as soon as possible.

105. (1) The excise duty of 1934 of Rs. 1-5 per cwt. has not effected the cane-grower adversely. Rather in my opinion it has helped the growth of the cane. Out of the proceeds of the excise duty certain portion has been given by the Government to research work and Cane Development Scheme which as pointed out above has done a good deal to foster the cultivation of better varieties of cane. The levying of duty in 1934 created a protest on the part of the mills, but it has not produced any adverse effect on the mills. Rather it has stabilized the industry and checked to some extent.

The dealers made profits out of the speculation in first duty because it was much expected and they were able to realize better prices. One month's time too was given and the market was able to adjust its position.

Consumer of course had to pay higher price as the incidence of excise duty in major portion was transferred to consumer. But this did not remain unbearable as the consumer had already been paying high prices before this.

(2) The recent increase in the excise duty has produced an adverse effect on all concerned with the sugar industry. Immediately after the imposition of enhanced duty the mills decided to close down. Both the Government and the Indian National Congress appealed to the millowners to continue crushing. The price had to be lowered up to anna 1 per maund according to several Government Notifications all ever. The cane-growers thus lost heavily and still have not been able to dispose off the entire crop particularly in Gorakhpur and Moradabad Divisions.

Many mills like Hardoi, Maholi, Rosa, etc., had to close on 31st March two months earlier than usual, as they could not run the mills profitably. Thus the cane within their reach remained undisposed.

The mills could not transfer the whole of the increased duty on to the consumers. Their profits were much curtailed and some of them had to close immediately after the imposition of excise duty.

The dealers along with the manufacturer are heavy loosers. The abrupt method of imposition of duty left no time for the market to adjust itself. The dealers could not take delivery of their commitments and forward sales. The result is that there is lot of litigation between the mills and the dealers.

Consumers too had to pay higher price after the imposition of enhanced duty.

106. We generally sell it Calcutta, Assansol and Khulna.

107. Yes, about 21,000 tons were exported this season to United Kingdom and South Africa.

The Khandke Sugar Mills, Ltd., Bareilly.

Letter No. Nil, *dated the 6th September, 1937.*

As desired in your letter No. *Nil* of 23rd August, 1937, I have pleasure in enclosing herewith a note about my impressions of the Sugar Industry in Formosa.

The figures of the cost of cultivation, rates paid for cane purchased from farmers and the total cost of production have been obtained from agricultural and other officials of the factories. Figures regarding efficiencies, etc., have been taken from the actual records of certain factories. Detailed figures in this line are not given in the note but will be submitted if required.

Owing to the fact that the Government of Japan are very reluctant to allow foreigners to see the factories and collect information it was very difficult to get the information obtained and it was mostly due to some very sympathetic and frank officials of certain factories that I could get these figures.

I am not sure if my note will be of much use to you as the conditions in Formosa and in India, especially with regard to cane cultivation are very much different.

I shall be only too pleased to give any further information that you may require and that I may be in a position to give.

Enclosure 1.

A Brief Note on the Sugar Industry in Formosa (Japan).

Formosa was ceded to Japan in 1894 and up to 1902 there was, on the island, only one Sugar Factory worth the name. During the last 30 years the Industry has seen a wonderful progress which has been mainly due to the encouragement it received at the hands of the National Government.

Now there are about 50 sugar factories working on the most modern lines and the average crushing capacity is about 1,000 tons of cane per day, some factories being of a capacity as much as 3,500 to 3,700 tons of cane per day. All these 50 factories are owned by only 10 different companies. Formosan Sugar Industry has made Japan independent for sugar supplies and has brought the country's international trade into a favourable balance. The sugar factories now own a railway line of about 1,500 miles which affords an indispensable facility to the island'''s traffic.

Originally most of the factories were installed with machinery manufactured in foreign countries such as Great Britain, America or Germany but later on when the factory capacities were increased all additional machinery was made either in Japan or in Formosa itself. Such important components as the milling plants, boilers, etc., were also locally made and are at present working alongside the foreign made plants with exactly the same efficiency. The one most striking aspect of the industry is that with only 50 factories in the island the people have set up, there, a large foundry and works fitted upon modern lines where all renewals and replacements big or small, are manufactured. Not one order for spares or extensions goes out of the country.

Sugarcane cultivation.

The original local varieties have now almost completely disappeared. The varieties that are now mainly grown are POJ 2725, POJ 2878 and a variety named P.J 2883 is also grown at places. The percentage of the different varieties is about 78 per cent. POJ 2725, 17·5 per cent. POJ 2878 and 3·5 per cent. POJ 2883 and 1 per cent. other varieties.

A Government sugar experimental institute has been established at Tainan where research work connected with the industry as also experiments regarding breeding new varieties of sugarcane are carried on. The POJ varieties mentioned above have, to some extent deteriorated in the course of time, and an important problem is now facing the industry as the Dutch Government (Java) and other sugar producing countries have placed an embargo on the export of seed canes. The institute is therefore busy with experimenting in this line.

Sugarcane is planted usually in the months of July, August and September and then in February, March and April. Owing to favourable climatic conditions, watering is required only in the months of November, December and March and irrigation water is given wherever available.

The charges for irrigation are only Y 9·60 or about Rs. 7-8 per Hectare. (2·47 acres). Plantations are made almost in the same way as in Bombay, Deccan and the normal distance between rows is about 1·25 meters. Earthing up is done in the same way and artificial fertilisers in addition to green manuring are used as the facilities for irrigation permit. Only a small portion of the total area under cane has got irrigation facilities. The yield of irrigated crop is about 25 to 30 per cent. higher. On the fields most of the work is done by manual labour and buffaloes are used instead of bullocks. Tractors are used only on big areas which are available nearer the sea-coast. The average yield is 110,000 to 160,000 kins per Hectare or 27 to 37 tons per acre the best yield being 300,000 kins per hectare and the poorest 60,000 kins per hectare.

The total cost of cultivation inclusive of all expenses such as supervisions, etc., works up to Y 300 per hectare *plus* about Y 35 for cutting and loading in trucks. Taking the average yield as 120,000 kins per hectare the cost of cane delivered into railway trucks works out to about Y 2·80 per 1,000 kins or say about Y 3·25 per 1,000 kins delivered alongside the carrier (one kin = 1·37 lb.). This works out to about 0·195 *Y* per maund of cane delivered alongside the carrier or As. 2-5¼ per maund. This figure of cost of cultivation has been obtained from an agricultural Superintendent of a factory. The cost of cultivation of farmers may work out slightly higher owing to lower yields and the average rate paid for cane to farmers at present was about *Y* 3·50 to *Y* 4·00 per 1,000 kins or As. 3-1½ per maund. Some factories grow on own farms as much as 40 per cent. of their total requirements of cane.

Manufacturing Cost.—The figure of the actual manufacturing cost was generally given as *Y* 3·00 per picul of sugar. The total cost of production of sugar was mentioned as round about *Y* 6·0 per picul (about 137 lbs.) The actual recovery on cane is a little over 13 per cent. Taking a factory that grows 40 per cent. its own cane and purchases 60 per cent. from farmers the figures work out as under:—

Cane required to make one picul of sugar—7·7 piculs or 770 kins.

Taking 40 per cent. of the cane at *Y* 3·25 and 60 per cent. at *Y* 3·75 per 1,000 kins or at an average price of *Y* 3·55 per 1,000 kins, cost of 770 kins is = *Y* 2·733. Deducting this from the total cost, *i.e.*, *Y* 6 the manufacturing cost = *Y* 6 − 2·733 = *Y* 3·267 per picul of sugar and this works out to about *Y* 1·90 or Rs. 1-6-9 per maund of sugar. Of course this includes all expenses such as depreciation, repairs, renewals, etc. This figure of the cost of manufacture does not appear to be very low especially when we take into consideration the large capacities of the mills, the extraordinarily high yield of sugar extraction and the low salaries paid. The Chief Chemist and the Chief Engineer of a factory crushing 3,500 tons of cane per day were being paid *Y* 350 to 400 per mensem each, *i.e.*, about Rs. 300 at the present rate of exchange. The Panmen get *Y* 1·50 or Rs. 1-2-6 per day and the coolies get about 40 to 50 cents, *i.e.*, about As. 6 per day.

The Factories.—The most striking feature in the factories was the elaborateness, and the resulting high efficiency of the milling plants. The milling plants are generally equipped with two sets of knives, one crusher, one shredder and four mills of three rollers each. The preparation of the cane is so thorough that the resulting bagasse contains very little sucrose and the milling efficiency runs up to an average of 98·6 per cent.

Most of the factories make brown sugar for being sent to Japan proper, for being refined and made into cubes. Only a few factories make refined sugar for local consumption in the island.

In some factories a little extra fuel is required as the fibre content of the cane is low. Steam coal is available at low prices owing to the very low transport cost, due to short distances. Cardboard is made from bagasse and these paper factories take bagasse in exchange of coal from the sugar factories.

Another important aspect of the industry is that almost all the waste molasses is utilised, mainly in manufacturing industrial alcohol. The Japanese people have not yet commenced making fuel alcohol suitable for use in internal combustion engines but a scheme for doing this is under consideration. The present difficulty is that the price of imported gasoline is very low and it is difficult to make it a profitable proposition to manufacture fuel alcohol from molasses. But owing to the fact that Japan at present is almost entirely dependent on imported supplies of gasoline—a situation which is far from desirable—the people will find out a way to develop this by-product.

General.—There exist certain very useful laws made by the Government which help to place the industry on a sound basis and these are:—

(1) Zoning system for cane supplies.

(2) No new factories can be started without Government licence and even small gur making establishments are considered factories.

(3) A sugar experimental institute which is constantly watching the technical as well as the agricultural side of the industry and rendering direct assistance to it.

Sugarcane Prices.—These are not fixed by Government but are allowed to fluctuate. They mostly depend upon the prices of rice which is the main crop of the island and unless the cane prices are fair the farmers are not inclined to grow sugarcane. Some people told me that there was a Government legislation, that every farmer was bound to put a certain percentage of his holding of land, under cane, but this was not confirmed by the people in the factories or at the experimental station.

Enclosure 2.

Replies to the Questionnaire.

1. Our factory started crushing in January, 1933, and had to be closed for the season after working for about 40 days owing to want of cane and breakdown. The capacity of the factory that year was 75 tons of cane for 22 hours. Its present crushing capacity is about 300 tons per day.

2. Our output of sugar has been as follows:—

	Mds.
1933-34	22,287
1934-35	30,957
1935-36	39,068
1936-37	69,802

Different classes of sugar were manufactured in the following proportion:—

	Per cent.
No. I	30
No. II	70

3. (*a*), (*b*) & (*c*) Yes.

4. Process of manufacture in our factory is sulphitation.

In the sulphitation process, the plant is less expensive and the process is cheaper to work. On the other hand, the carbonitation process is more positive in its action, yields a higher recovery, and the sugar produced is of a better keeping quality. The principal items which raise the cost of carbonitation are limestone which has to be used to a quantity about 4 per cent. of the weight of the cane and coke. The determining factor will therefore be the distance of the factory from the quarries and the coal fields.

5. We have increased the crushing capacity from 75 tons to 300 tons since 1933.

6. Addition of a mill, cutters, a boiler, a pan, press crystalizer and centrifugal machine.

7. (*a*) The overhead charges of a factory decrease relatively per unit increase of crushing capacity. The larger the factory, the less are the proportionate charges on skilled directing staff, depreciation and certain factory operations. The size will ultimately be determined by the capital available, the availability of raw materials at a reasonable price in the neighbourhood and the facility of access to markets.

(*b*) The capacity of smallest will depend on local condition. In United Provinces the smallest economic unit will be 300 tons of crushing capacity per day.

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8. Simple parts such as cast iron tanks and pipes and other plants comparatively easy to manufacture are obtainable in India. Generally speaking, sugar machinery is a specialised manufacture and has to be imported.

9. No answer.

10. We do it on a small scale in our own land purchased outright.

11. (*a*) About 200 acres. Average area under cane every year about 60 acres.

(*c*) & (*d*) *Nil.*

(*e*) About 300 maunds per acre.

12 & 13. No.

14. (*a*) Production of cane has gone up considerably.

(*b*) Quality of cane has been improved.

15. Do not know.

16. Our factory is assured of sufficient supply of cane.

17. The supply and prices of cane are influenced considerably by the demand of cane and competition of neighbouring factories.

19. Though the production of sugarcane in 1936-37 is the highest in record in other areas, it is not in excess in our area and therefore we do not consider any restriction necessary.

21. The main difficulty of cane-growers is the absence of good roads which very often are out of condition and bridges and culverts over rivers and rivulets.

22. (*a*) The last Tariff Board were against compulsory acquisition on the grounds (1) that it would antagonise the expropriated ryot and his fellow-ryots and (2) that it would interfere with the traditional freedom of cultivation enjoyed by the Indian ryot. In our opinion these objections still prevail in full force, and the acquisition of land for a factory purpose should be left to voluntary negotiations.

(*b*) In the United Provinces and Bihar where owing to a large growth of new factories conditions have altered since the Act of 1934 fixing a minimum price of cane and the fact that no insuperable administrative difficulties have been experienced have removed the main objection to zoning from the ryot's point of view. In our opinion it would be desirable both with a view to remove uneconomic competition for cane and to establish a more intimate personal relation between the factoryowner and the ryot to introduce a system of zoning. But this should be restricted to gate cane.

23. We consider that the development of feeder roads is the legitimate function of Local Boards. As regards advances of cash or supply of seed and manure, several factories even at present make them. Such advances should continue to be purely voluntary. It is suggested that if a summary process were provided for recovery of these advances the extension of the voluntary system would be facilitated.

24. (*a*) We are in favour of fixation of a quota for sugar manufactured by factories. Since the International Sugar Conference in London has definitely decided against India in matter of export to countries other than Burmah and since the consumption of sugar *per capita* has not much increased, it is absolutely necessary to control production to meet only the demand. This will thus dispel the depression in sugar industry which we are experiencing at present.

(*b*) We are in favour of—

(i) licensing new factories,

(ii) extensions of existing factories,

for same reasons at stated in 24 (*a*).

25. We get our entire supply of cane at gate.

26. By carts only. Average weight of cane per cart is about 20 maunds. It is useless to substitute the present carts by rubber-tyred ones unless Local Board and Local Bodies construct proper roads, bridges and culverts.

27. The condition of main road is fair, but that of the feeder roads is hopeless.

28. Five to seven miles and the time between cutting and delivery at factory is not more than 24 hours.

29. Not known.

30. None.

31. We arrange it through Agents. Normal period of detention of a cart in our factory is one to two hours. The present arrangement is satisfactory.

32. We have no railway siding.

33. Not known.

34 & 35. No.

36. Do not know.

37. We have not measured.

38. We purchase nearly our full requirement through Agents and contractors.

39. We have no dealings with the cultivators since 3 years. Our Agents and Contractors give advances in cash only.

40. We pay commission at a flat rate of Rs. 2 per 100 maunds of cane.

41. None.

42. We have weighbridges in the cane yard of the factory. Very often the payment is made by us, through the agents and contractors at the time of delivery of cane and sometimes the account is settled weekly. In the latter case they take advances from the factory on cane account.

43. The prices paid for cane from year to year are as under:—

1932-33	4 to 5 annas per maund.
1933-34	5 to 8 Do.
1934-35	Minimum price fixed by Government.
1935-36	
1936-37	

45. The supply and price of cane is influenced by the price and demand for gur and khandsari sugar to a great extent.

46. Do not know.

47. We paid prices in excess of the minimum prices by one anna per maund towards the close of the season when cane supply began to run short.

48. The price of cane should be disconnected from the price of sugar and should, it is suggested, be fixed on the cost of production of cane as ascertained by the Tariff Board in its present enquiries. It is necessary that the price should be uniform for both the United Provinces and Bihar. And the price once fixed at the commencement of the crushing season should be maintained for the whole of that season.

49. Bonus should be paid provided the sugar rates permit.

50. About 130 days. The period is not sufficient for economical working.

51. There are many possibilities, but in view of the overproduction the time has come when the season instead of being extended should be shortened.

Labour.

53. (*a*) We employ following skilled labour in the crushing season:—

One Manager.
One Chief Engineer.
Two Assistant Engineers.
One Chief Chemist.
Three Assistant Chemists.
Six Panmen.
Three Supervisors, and
Two hundred and fifty unskilled labourers.

(*b*) In silent season we keep the following skilled labour:—

One Manager.
Two Engineers including Chief Engineer.
One Chemist.
Two Panmen.
Two Supervisors, and about
Thirty unskilled labourers.

54. We so far have not imported labour from abroad, but the majority is from Deccan and Bihar.

55. No answer.

56. Adequate housing arrangements have been made for housing labour and Factory Doctor looks after the health and welfare of the staff and the labour supplying medicines and giving other aid at the cost of the factory.

Power.

57. We are not able to meet the whole of our fuel requirements from the available bagasse and we have therefore been using coal and wood as supplementary fuel. In 1936-37 we required coal ·74 maund coal and ·78 maund wood per 100 maunds of cane crushed. In 1935-36, 2·5 maunds coal and 1·75 maunds wood per 100 maunds of cane crushed.

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By-products.

58. There is none except molasses and press mud.

59. Outturn and prices of molasses have been as follows:—

	Roughly.	Value.
	Mds.	Rs.
1934-35	12,000	1,195
1935-36	15,000	1,100
1936-37	25,078	Not available.

60. Our molasses is sold in the Hills of the Nainital District and they are sent by motor lorries. As we have no railway siding we cannot give our opinion as to the facilities afforded by the railway.

61. If permission for distilling is granted the molasses would be utilized to the best advantage of the industry.

62. We have no surplus bagasse.

63. None.

		Stock at the beginning.	Stock at end.
		Mds.	Mds.
64.	1933-34	*Nil*	2,020
	1934-35	*Nil*	1,125
	1935-36	*Nil*	14,562
	1936-37	2,000	46,495

65. We have storing capacity for 40,000 maunds of sugar. We contemplate increasing the capacity for the ensuing season.

66. Owing to very heavy rains last year when we had large stock on hand at close of the season, 10 per cent. of our sugar was slightly damaged. We do not think that such damage depends on the quality of sugar as most of the bigger factories round about us in spite of their having manufactured better quality of sugar suffered loss owing to heavy rains. We also think that sugar manufactured under sulphitation process is liable to such damage in rains unless provision is made for absolute damp-proof godowns.

67. We sold outright.

68. By provision of damp-proof godowns.

69. Sugar is not likely to be damaged unless exposed.

70 & 71. No.

72. Our statement in reply to this question is long due from the mills.

73. Copy of Balance Sheet for 1935-36 is enclosed.

74. Only last year we have provided Rs. 10,000 for depression in our Profit and Loss Accounts.

75. None.

76. We have made no profits since starting of the mills and could not pay any dividend.

77. By loan from Bankers on credit and pledging sugar stock at rate of interest from 7½ per cent. to 9 per cent.

78. Rs. 1,200. Head office expenses.

The Managing Agents are entitled to 10 per cent. commission on nett profit. Last year they got Rs. 1,400.

79. We consider that 10 per cent. on the original block account (without allowance for subsequent writings off for depreciation) would be a fair return. The reasons for this view are:—

(1) That is in the years when new factories were started in large numbers, money was procurable only at high rates of interest and debentures were generally issued at 7 to 8 per cent.

(2) The industry is a young industry and both in the interests of the factory and of provision for labour welfare reserves have to be built up. If 10 per cent. is earned, 4 per cent. will have to be put aside for the reserve fund, and the actual dividend to the share-holders would only be 6 per cent.

(3) Provision has to be made against running risks, break down of machinery and so forth.

Efficiency of Production.

80. The form has not been received.

81. We have brought down the cost of manufacture from Rs. 3-8 to Rs. 2-4 partly by extending our plant partly by installing more efficient machinery and slightly reducing overhead charges.

82. We think we shall be able to reduce the cost of work by 2 to 4 annas. We do not consider that there is much room for improvement in recovery rate.

Marketing.

83. Our marketing centres are:—

(1) Haldwani.
(2) Kassipore.
(3) Ramnagar.
(4) Moradabad.
(5) Bareilly.
(6) Delhi.

84. We sell our entire sugar through our sugar selling Agents.

85. None.

86. Detailed statement is not yet to hand from our mills.

87. Not much.

88. Not known.

89. Yes. Indian sugar deteriorates little more rapidly than Java and other imported sugar, but the best quality of Indian sugar is as good as best imported sugar in keeping quality.

90. Java sugar is preferred in hotels and restaurants run in the European style for their customers, Europeans and Europeanised Indians. But even here high grade Indian sugars are replacing Java sugar. To a very small extent in the preparation of some special Indian sweets where customers like a bright white colour, Java sugar is used.

91. The same answer as to the Question No. 89.

92. Since last year 1935-36 season factories have not been able to dispose of their stock of sugar from day to day as was the practice in the preceding years. Last year we had 30 per cent. stock on hand and this year we have about 65 per cent. Carrying of stock is financed by pledging the stock with the Bank.

93. Yes.

94. Yes. Most decidedly.

95. We are in favour of standardisation as it is an essential preliminary to the operations of a Central Sales Organisation. Experience was not available when standards were tentatively suggested and factories were not able to adopt them. They had therefore to do business on the basis of samples of individual factories.

96. (*a*) & (*b*) None.

98. We consider that the time is not yet ripe for the establishment of a "futures" or "terminal" market. Futures markets are difficult to control. No amount of rules will secure it as the working will depend on the men and not on the rules.

99. This may be estimated at a million and one hundred thousand tons.

Considering that the consumption of white sugar is only 7 lbs. per head as against 100 lbs. in Western Europe, the United States and Australia, and that there has been a large increase in world consumption in recent years, there do seem to be possibilities of increasing the consumption. The present low prices are another factor in favour of an extension.

100. It is not possible to say to what extent factory sugar is replacing gur as judging from statistics both industries are expanding. In the sweetmeat trade however it is a matter of common knowledge, that while for certain sweets gur is still preferred, the substitution of sugar for gur has gone far. It is impossible to make an estimate of the extent of this substitution.

101. We have no useful information on this question.

102. The All-India Sugar Association have got the particulars and will forward the same to the Tariff Board.

103. We believe that foreign sugar was imported till 1936 at unremunerative prices in Kathiawar Ports.

Export of Sugar.

		By sea. Tons.	By land. Tons.
104.	1933-34	425	33,110
	1934-35	363	34,034
	1935-36	389	25,836
	1936-37	521	23,381 (for 10 months up to January, 1937).

In our opinion facilities should be offered for exports of Indian sugar to the United Kingdom by admitting it at certificated colonial rates (1*s.* 5·3*d.*). Exports will become possible when Indian price *plus* freight *plus* this preferential rate is equal to or lower than the price of non-Indian sugar landed in England after paying the regular Customs duty. India at the moment does not make sugar of 96 polarisation as there is no internal demand for it. Indian sugar is about 99 polarisation.

107 to 111. The Indian Sugar Mills' Association will deal with these questions in their memorandum.

The Kesar Sugar Works, Ltd., Bareilly.

Note.

The Sugar Industry Protection Act of 1932 was meant to provide for the fostering and development of the Sugar Industry in British India. The first period was to be from 1st April, 1932, to 31st March, 1933, and the protection given originally for this period was Rs. 7-4 per cwt. In this connection, it is well to remember that in April, 1931, the revenue duty on imported sugar was Rs. 7-4 per cwt. and an additional surcharge of 25 per cent. was levied on sugar as on all import duties by the Government of India in September, 1931, to that the total import duty on sugar worked out to Rs. 9-1 per cwt. Now this revenue duty of Rs. 7-4 per cwt. was converted by the Government of India into a protection duty of that amount; the surcharge of Rs. 1-13 being only an accidental addition thereto liable to be removed by the Government when financial conditions permitted the effect of successive increase in the import duty on sugar since 1930 had the effect of stimulating sugar production in India and with guarantee of protection over a period of 15 years capitalists thought it safe to invest large sums of money in putting up sugar factories. How rapid the development has been can very well be seen from the fact that in 1930-31 while the production of sugar both from cane and gur amounted to only 150,000 tons, it has now gone up to over one million tons. The number of factories has also increased from 32 in 1931-32 to 156 in 1936-37. That this development of the industry has enabled the agriculturists in United Provinces and Bihar to tide over the worst period of depression will we are sure, be corroborated by the Revenue Officers of the United Provinces and Bihar Governments. When crops like wheat, cotton, oil seeds, rice were selling below cost, sugarcane offered the only means of enabling the cultivator to make some sort of a living. It is also gratifying to report the imports of foreign sugar which amounted to 940,000 tons at 15¼ crores in 1929-30 have declined to less than 200,000 tons valued at less than 2 crores of rupees. The money thus saved remains for circulation within the country and the principal parties who derive benefit from it are the sugarcane growers, consumers, the labouring population both skilled and unskilled, the railways and the shareholders of the sugar companies. It may the stated that 50 per cent. of the money saved goes directly into the pockets of the cultivators, other 2 crores account for the wages of labourers, ½ crores for the salaries of educated staff, two crores to the Government by way of excise duty and the rest in income-tax, dividends to shareholders and management expenses. While this happy result has been achieved, it has not been at the cost of the Indian consumer who now pays a price much lower than the pre-war price or even the price immediately before the grant of protection. It is sometimes argued that the prices of Java sugar are so low at present that if there were no protection, then imported sugar would have been cheaper than Indian factory made sugar, but this argument is fallacious inasmuch as Java never reduced her price until she lost the Indian market and had heavy stocks of sugar to carry forward. The moment India ceases to produce sugar, she will put up her price and there is no doubt that with the general rising of the world's prices of sugar which we are now slowly witnessing as a result of the clearance of stocks in Cuba and Java, she is not maintaining the low price which prevailed in 1934-35 and 1936. Had it not been for this protection, the extra supplies of cane, resulting from the growing of improved Coimbatore varieties over larger areas every year, would not have been absorbed and there would have been a catastrophic fall in the price of gur. No doubt, the area under sugarcane has increased from 3 million acres in 1930-31 to over 4 million acres in 1936-37, but this increase in area has been caused by—

(1) the profitableness of the crop as compared with other crops during the period of depression.

(2) The purchase by factories of sugarcane from very long distances even up to 100 miles which encouraged increased cultivation of cane.

We thus see that the development of sugar industry in India has more than justified the anticipations of the first Tariff Board and has also been a means of relieving unemployment to some extent and has particularly done a large amount of good to the two provinces of United Provincies and Bihar where cane cultivation is more largely concentrated. The question before the Tariff Board now is to examine, according to the Sugar Industry Protection Act of 1932, whether the amount of protection to be continued from 1st April, 1938, to 31st March, 1946, should be at the same or lower rate.

In 1934 the Government raised the protection from Rs. 7-4 to Rs. 7-12 but levied an excise duty of Rs. 1-5 per cwt. on all Indian factory made sugar as their Customs revenue from imported sugar had fallen considerably. They however assured the industry that if and when in future surcharges on other import duties are removed, the surcharge on sugar will continue to be in force as a corresponding excise duty has been levied on the Indian factory sugar. In this connection it should be stated that when the protection was given in 1932, there was no mention of the levy of an excise duty, but the idea was to enable the factories to make profits so that they may build up reserves which may prove useful in lean years or when protection may prove useful in lean years or when protection may be withdrawn. In spite of all this, from the 1st April, 1934, an excise duty of Rs. 1-5 per cwt. was levied and many of the factories, which were erected only after the passing of the Act of 1932, has no time to pass over their initial difficulties on account of lack of experience and other causes incidental to a new industry and were handicapped in the race for competition with older factories. The result has been that while old concerns did make some money, new concerns have not been half so fortunate. The fixation of the cane price by the Government in United Provinces and Bihar was another measure of State Regulation that immediately followed the levying of the excise duty. With the increase in the number of factories internal competition became keener and the price of sugar has been continually falling with the result that the industry was in a very critical condition in January, 1937. At such a time the Government of India thought it fit to further raise the excise duty of sugar and made the situation still worse. Factories would have closed down by the end of March and that would have steadied the market. But the price of sugarcane was lowered by the two Provincial Governments and this reduction in the price of cane has led to overproduction of sugar in the current season so that it looks as if the industry is in for a bad time. Now let us examine the various courses that suggest themselves to us for ameliorating the condition of the industry.

(1) Will a reduction in the import duty on sugar be of any use?

At present the import duty is Rs. 9-4 per cwt. and the price of Java sugar in Bombay is about Rs. 9 and some annas per Bengal maund, while the price of Indian sugar is Rs. 7-12 per Bengal maund. So, a reduction in the import duty of Rs. 2 per cwt. will not bring in more imports from either Java or other foreign countries and hence the Government will not get Customs Revenue in that way. Further the world's price of sugar is slowly rising and so any reduction in the import duty will be nullified by the rise in price of sugar.

(2) Should India be allowed to export sugar?

This season, the production has been nearly 1,100,000 tons which is more than India's consumption needs, and hence it is desirable that an outlet should be found for the surplus sugar. The natural outlet for this is Great Britain where import duties on sugar are graded not only according to the class of sugar but also according to the source of supply, *i.e.*, import duties on foreign sugar are different from those on Dominion sugar and Colonial sugar. If Indian sugar is treated like colonial sugar in United Kingdom markets and drawback on the Excise Duty be given on the exported sugar, then India may find it advantageous to relieve the congestion in Indian markets by exporting abroad. Even though some loss may occur in the export transaction the general benefit that will ensue in the Indian markets would be more than ample to compensate for the loss.

(3) What measures should Government take to stabilise the industry and to prevent overproduction?

In the first place, the protected industry is one in which State Regulation to a considerable extent is justified so that the community as a whole may reap the advantage of protection and no particular interest may have to make undue sacrifices. As the State has already levied the excise duty and regulated the price of cane in the interest of the growers, it further follows that an extention of this principle of State intervention should be made to regulate production. Our view is that (1) the State should, with a view to prevent overproducion, take more active part by requiring that no new factory should be allowed to be erected without a license from the Government; (2) No old factories may be allowed to increase their capacity unless and until the Government are satisfied that such extension is in the interest of the industry; (3) that the Government should mark out definite areas from which each factory can draw its supply of canes. No factory should be allowed to go beyond its zone and this will discourage the growing of cane for factories by ryots outside the zone; (4) If production is regulated the price of sugar will bear more relation to the value of the imported sugar and this will enable factories to pay a decent price to cane-growers, to promote whose interests protection was given originally; (5) With a view to enable efficient factories to work and uneconomic units to close down, it is necessary that more strict control over the purchases of cane, weighment of cane as well as payment to growers of cane be exercised so that uneconomic units, by resorting to malpractices in this respect, may not be able to enter into unfair competition with more efficient units dealing honestly and fairly with cane-growers. In Java and in Australia no new factory is allowed to be put up without permission from the State and steps are also taken to prevent overproduction of sugar. The State, having intervened in India to certain respects, should make hold to go further and do what it can to ensure a healthy condition for the industry. The case of jute in altogether different. Jute is India's monopoly and it is an export commodity which the world requires and hence any regulation of that industry, with a view to curtail the output or to prevent new factories from springing up, would not be looked upon with favour by all concerned but a vigorous State policy for sugar is clearly indicated.

REPLIES TO THE QUESTIONNAIRE.

1. The Kesar Sugar Works, was put up in 1933 and began the manufacture of sugar in the season 1933-34. Its full capacity originally was 500 tons but was subsequently raised to 1,200 tons.

2. The output during each season from 1933-34 to 1936-37 and the different grades of sugar produced each year are shown in the following table:—

Qualities.	Seasons.				Remarks.
	1933-34.	1934-35.	1935-36.	1936-37.	
Special	904	692	568	914	(1) From season 1933-34 to 1935-36 the filling net weight of bag was 2½ maunds Imperial. (2) In season 1936-37 the filling weight of a bag was 224 lbs.
No. 1	29,278	24,089	22,807	22,562	
No. 1 A.	33,398	98,972	132,469	127,776	
No. II	10,358	1,012	87	2,097	
Wet Sugar	5,060	1,012	87	2,097	
Powder	16,570	1,557	5,946	1,256	
W. R.	16,570	1,557	5,946	2,320	
Radil	130 Mds.	1,605	2,797	3,076	
N. Production	130 ,,	1,605	538	3,076	
Total bags	95,568 130 Mds. Radix Dirty Sugar.	127,827	165,212	60,001	

3. Our factory is advantageously situated in respect of cane supply as there are over 30,000 acres of cane each year in our Tahsil and all cane is improved Coimbatore varieties, the Deshi varieties having been supplemented before the factory was put up. The area is submontane and suitable for cane-growing. We are far from the place which supplies good limestone to us.

(A) As regards important markets, our factory was favourably situated as the Punjab markets as well as Rajputana markets were close to us. But the low freight rates sanctioned by the Bengal and North-Western Railway and the East Indian Railway for factories situated on their lines have deprived us of our geographical advantage.

(B) As regards railway communications our factory is on the Rohilkund and Kumaon Raiway line and is situated on the other side of the road connecting Baheri with Bareilly and Nainital there are only three District Board roads for cane carts but these are not in good condition. Cane ten to twelve miles away can only be brought with great difficulty for want of roads and bridges over nallas or water courses. No cane is brought by canals. Better roads and the opening of new roads are urgently called for in the interests of the industry.

(C) As regards labour supply we draw most of our factory labour from Gorakpur and Chapra side as they are trained in factory work while local people have no experience. For unskilled work, local labour as well as men from the Hills are available in sufficient number on five to six annas a day.

4. Sulphitation. We sulphitate not only raw juice but also syrup.

5. Since erection in 1933, our plant has been extended so as to crush 1,200 tons cane per day. Duplicate pumps have been provided to reduce stoppages to a minimum. Other additions are given below:—

Additions made since the factory was built.

(1) 100 h.p. motor for cane knives substituted for 75 h.p. motor.
(2) Apron type of intermediate bagasse carrier substituted for scraper type.
(3) Diamond top roller for the 1st mill.
(4) Van Roalte top roller for the 2nd mill.
(5) One juice heater.
(6) Raw juice level recorder.
(7) Temperature recorder for juice heaters.
(8) One new sulphur furnace and a new compressor engine.
(9) Juice catcher for the quadruple.
(10) One new mud pump.
(11) Feed water pump.
(12) Recorder on vacuum pans.
(13) Two new filter presses.
(14) Seed crystalizer.
(15) New Hallesche Massecuite pump.
(16) New Hallesche Magma pump with a bigger motor.
(17) Quito meter.
(18) Five cetrifugal machines.
(19) Electric driven turbo pump.
(20) E. C. manufacturing plant.

6. We are not contemplating any further extension of our plant as the condition of the industry is not good.

7. The factors which determine the size of an economic plant are:—

(*a*) (1) The availability of the required quantity of cane at an economic price having regard to the f.o.r. factory price of sugar.

(2) The capacity to carry highly qualified technical staff both on the engineering and manufacturing side of the factory. The greater the output, the lower the cost of manufacturing other conditions remaining the same.

(3) The proper balancing of the plant both on the milling and boiling sides that the factory may have regular smooth working without undue stoppages.

(4) The provision of all machines and apparatus of such calibre as to give high efficiency and to reduce preventible losses in operation.

(*b*) A 400-ton factory well equipped in all its departments can be operated economically under present day conditions, such factory by depending wholly on cart cane which is fresh as compared with rail-borne cane would be able to show better result than a bigger unit working on 50 per cent. rail cane and 50 per cent. cart cane. When sugar prices are low, such a small factory would have less difficulty of shortage, less locking up of capital, less interest and insurance charges to pay and will save also on its raw material.

8. Messrs. Jessop & Co., Bengal Iron & Steel Co., and the Savan Engineering Sugar Works now supply much equipment for sugar factories. Of course boilers, engines and such like are imported from abroad.

9. We have got our own expert staff and so we had few occasions to ask for technical assistances from the Imperial Institute of Sugar Technology and the Industries Department of our Provincial Government. We are therefore not in a position to say anything definite on this subject.

10. Being convinced that the salvation of the sugar industry lies in getting its raw material of high sucrose-content at the cheapest price and when it is fully mature, we have opened a farm of 3,000 acres near Kichha Railway Station in Nainital District. We have taken Government land on lease and not much difficulty was experienced in obtaining the lease as it was Government waste land though Government were anxious to protect the interest of the smaller cane-growers of the district who usually marketed their cane to the factory.

11. (*a*) 3,000 acres.

(*b*) We first took possession of 400 acres in January, 1936. As the waste land had to be cleared of Jungle with Diesel Tractors, we planted only 100 acres in 1936 but raised it to 600 acres in 1937.

(*c*) Coimbatore varieties, 300, 312, 313, 331, 285, 281 290.

Java varieties P.O.J. 2878 and E.K. 28.

(*d*) We are trying the improved trench system of planting and also planting on the flat. We give sulphate of ammonia and castor cake to the crop. A three years rotation system will be followed.

(*e*) The first year's results cannot be taken as average cane having been grown on land newly reclaimed from Jungle and there was no proper drainage.

(*f*) The first year's clearing charges and preliminary expenses were heavy and so a reliable figure for cost of production cannot be given.

12. About 50 acres are set apart for experimental plots.

13. We have freely consulted the local Agricultural Department as regards early and late varieties and their advice we have followed in the selection of different varieties. As the crop of 1936 has been used wholly as seed for planting in 1937 we are unable to give any further information.

14. The area under cane has increased after we put up our factory and we have been getting increased supplies of local cane as follows:—

	Cart cane. Mds.
1933-34	1,184,000
1934-35	1,815,000
1935-36	2,245,000
1936-37	2,000,000

(*b*) There is no improvement in the quality of cane, so far but as the factory and the Agricultural and Co-operative Departments are working together to improve the standard of cultivation in the neighbourhood of the factory and have this year given out improved varieties for planting over 1,200 acres within six miles radius of the factory, we hope to see some improvement in quality in future.

15. Frost occurs once in three or four years but it is not so severe as in the Punjab districts and the damage may be taken as negligible.

Red rot is found in some cane but the greatest damage is from insect pests such as borers. The practice of keeping three and even more ratoons helps the spread of the disease.

16. Yes. The principal varieties are Co. 213, some Co. 290 and Co. 331.

The field yield is on an average 300 maunds per acre, but where proper cultivation and manuring are done the yields are up to 500 maunds per acre.

The average sucrose contents of mill cane as determined from factory crushing by our chemist was—

	Per cent.
November, 1936	10·10
December, 1936	11·08
January, 1937	12·10
February, 1937	12·30
March, 1937	12·39
April, 1937	12·90

The average of the season was this year 11·99 against 11·76 in the previous season. It may be mentioned that most of the cane crushed is Co. 213.

17. In the beginning of the season and right up to the end of February when supplies of cane are plentiful and the farmers were anxious to clear their fields, the competition of other factories does not lead to any rise in price of cane. It is only after the *Holi* holidays when the supplies begin to run short that competition of other factories may tend to raise the price. Of course, the competition of other factories operating within another factory's zone results in a shortage of the total supply of cane to that factory, and in our opinion it is essential that definite areas should be ear-marked for each factory so that no others can poach on it.

18. No. During the last five years, there has been a continuous increase and no fall in the area under cane cultivation but it is feared that with the rise in the value of other crops, the area will go down to some extent. Our factory is situated in a submontane locality so that there is rainfall. Some damage is caused to cane grown in low-lying lands, but, as a rule, rainwater is generally washed away into the rivers as we are at the foot of the hills. Of course, the decline in the price of sugar which reacts on the price of sugarcane will have some effect in contracting the area under supply of cane to the factory; if the price of *rab* is high, much cane is diverted to the manufacture of that product. But now-a-days, gur and *rab* are both selling cheap and, therefore, much competition from that side is not being felt. Alternative cash crops like oilseeds, wheat, etc., will no doubt replace cane to some extent in our area when these crops prove comparatively profitable to the cultivators.

19. In our area, the increase has been not very substantial and hence no restriction in our area is called for. It is in the neighbouring districts from where our factory drew supplies of cane, when the prices of sugar were comparatively high that the extension has been more pronounced but there a new factory is being put up and that will relieve the situation.

20. We are not in a position to give any detailed information regarding the cost of cultivating one acre of sugarcane by an average cultivator. From our experience of the locality we can say that for plant cane it is between 2½ to 3½ annas per maund for cane and the average yield is 300 maunds per acre. Of course, very little is spent on the ratoon crop and 3 to 4 ratoons are taken.

21. The main difficulties of cane-growers in the cultivation of cane are:—

(*a*) in getting good seed cane of the desirable variety or varieties,

(*b*) difficulty in getting fertilisers and manures at a fair price, and

(*c*) want of suitable agricultural implements for cane-growing.

If arrangements could be made to supply good seed, manure and improved implements recommended by the Agricultural Department, on credit, the money to be recovered when the cane is sold, there would be an increase in the outturn and more to the cultivators. There is also difficulty in regard to the delivery of cane at the factory for want of suitable roads and want of factory came in, but still they are not adequate. If Dunlop rubber-tyred carts, which carry more, are widely adopted, the result will be to the benefit both of the factory and the growers. More money should be spent on the provision of good roads by the Local Government.

22. Except where waste lands are available in the vicinity, it is not easy to acquire land or get it on lease at an economic figure.

In India, as cane is grown by a large number of small holders and as the State has given protection to the industry, it is most desirable that some benefit should go to the small growers of cane. We are, therefore, not in favour of compulsory acquisition of land but are emphatically of opinion that definite zones should be demarcated for each factory. Without the zoning system the factory has not got that incentive to work for the improvement of cane cultivation in its neighbourhood as the fruits of its labours might be taken away by a competing factory who has not spent even a single pie in bringing about the improvement. In other countries where factories have their own plantations, they are able to grow early, medium and late varieties of canes and supply them to the factory when they are at the optimum. Much can be done to improve the standard of cane cultivation and the introduction of varieties having high sucrose content if every factory is allotted a specific area beyond which it should not be allowed to operate. We have already entered into an arrangement with the local Agricultural and Co-operative Departments to improve the cane cultivation in our locality but we feel that, without the State regulation of areas for purchase of canes, the results will not be to our satisfaction.

23. We have already formed a Co-operative Cane-growers' and Suppliers' Association at Baheri and we have agree to give higher price for varieties of higher sucrose content and purity. A copy of the rules and regulations of this society may be obtained from the Registrar of Co-operative Societies, United Provinces to show to what extent we are prepared to help the cultivators.

24. Yes. We are deninitely of opinion that a quota for sugar manufacture should be fixed for each factory and no new factories be allowed to open without obtaining a license from the Government. The extensions to the existing factories should only be allowed in very exceptional cases where Government are satisfied that such extensions are necessary and in the interests of the industry. Our reasons for these are mainly agricultural. If the production is limited to the consumption needs of the country, the price of sugar will bear a fair relation to the price of imported Java sugar and that will enable the factories to pay a decent price to the cane-growers. If it be left to free competition, each will try to produce as much as he can, the price of sugar will fall very low and the cultivators will hardly get a fair return for their labour.

25. The percentage of gate cane has ranged from 44 per cent. to 52 per cent. of the total cane crushed in the factory, while the remaining quantity comes by rail. We have no tram-borne cane. The proportion has practically remained the same even though the total cane crushed each season has been more. In 1933-34 we crushed 2,600,000 maunds of cane in 1934-35 we crushed 3,500,000 maunds, in 1935-36 we crushed 4,400,000 maunds and this year 4,500,000 maunds.

26. Our canes are entirely transported by carts. The average weight of cane carried per cart is 16 to 18 maunds. In our opinion it is possible to improve the type of the country cart by the substitution of rubber-tyred carts. We have got improved rubber-tyred carts and they can bring from 40 to 50 maunds of cane at a time. Their carrying capacity is very much increased where roads are good.

27. The mileage of roads in our vicinity is not adequate. The main and feeder roads also require much improvement, while there are no roads in areas where cane cultivation is fairly extensive and they have to come by round-about routes also, there are no culverts or bridges over streams and nallahs and the cultivators find it very difficult to cart their cane to the factory.

28. Cane is brought to the factory by road from a distance of 10 to 12 miles. Three days elapse between cutting the cane and delivery at the factory. The cultivators cut their cane one day. The next day they strip of the dead leaves, load them in the carts and in the evening generally they set out for the factory where they arrive the next morning and their cane is weighed during the course of the day. Nothing is done by the cultivators to protect the cane from deterioration during road transport. Of course, during very cold weather months of December, January and February not much harm is done, but in the months of March and April, deterioration is very perceptible as shown by the fall in the purity of juice (see Appendix).

APPENDIX.

That the drying of the cane causes big losses to the factory is shown by the average results of a series of small scale tests on the rate of dryage and deterioration of different varieties on a factory in Upper India.

On January 15th, 20,909 maunds were left in the yard and on re-weighing on the 29th prior to crushing, the weight recorded was 19,254 maunds, representing a loss of 1,655 maunds or a total dryage during the 14 days shortage of 7·9 per cent. of the original weight. During these 14 days, daily analyses were made of the stored cane and these indicated a progressive and regular drop in purity.

The comparative analyses are given below :—

	15th January.	29th January.
Sugar per cent. cane . .	12·60	10·85
Primary juice purity . .	84·54	75·59
Mixed juice purity . . .	83·61	74·42
Syrup purity	87·16	79·29

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These records show that the juice has deteriorated during the period of storage by 9 units of purity and the sugar content of the cane has fallen by 1·75 units. A greater deterioration would undoubtedly have been noted had the bulk of the stored cane not consisted of Co. 213, a variety which does not deteriorate as rapidly as other Coimbatore or indigenous varieties; thus a small percentage of the supplies consisted of Co. 205, a variety well-known to deteriorate rapidly and in analysis of this cane on the morning of the 29th January a purity of 63·29 as compared with approximately 76 for Co. 213.

Further as in the case of drying the low temperatures experienced during the storage period have played an important role in minimizing the rate or deterioration, according to the mill extraction and boiling house recovery recorded by this unit, 2,300 maunds of commercial sugar would have been recovered from 20,909 maunds of cane on the 15th instant whereas on account of deterioration after 14 days' shortage and a drying of 7·9 per cent. on the original weight of cane the outturn of commercial sugar from the balance of cane was 1,650 maunds representing a fall in extraction from 11 to 8·6 per cent. on cane or a loss of 650 maunds of commercial sugar.

Nevertheless, in view of the previous results, the losses incurred by shortage, or in other words transporting cane from areas remote from the factory or cutting ahead of the mill can be considerable to grower and miller alike, especially in the months of March and April when the average temperature is 90 and 100 degrees respectively as compared with 68 degrees in January.

29. As cane-growers bring their cane in their own carts hired by them, we are not in a position to know the exact cost of transport of cane per maund per mile. But in our locality from all that we know, the cost would be between one pie and two pies per maund per mile, depending upon the sufficiency of carts and the availability of bullocks not being engaged in other agricultural operations.

30. The factory, every year used to spend a few thousands of rupees on building temporary bridges to enable cane suppliers to cross streams and nallahs but last season the District Board gave the *Theka* for Kicha river, about a mile and a half to the west of the factory, and carts coming from that side had to pay a toll of three annas to the contractor. There was much dissatisfaction on that account. In Baheri town there is a notified area, but, as the factory pays a consolidated sum of Rs. 3,500 to the notified area, no toll is levied on carts entering Baheri town.

31. Previously, we used to have our cane agents who made *suttas* with cane-growers and bound them to supply cane during the whole of the season by fixing their daily quota. During 1936-37 under the revised United Provinces Cane Rules we dispensed with the services of cane agents for supply of gate cane, and with a view to test how much gate cane can be had, we did not fix any quota for each grower for some time, but went on taking as much cane as was offered at the gate. The detention at the gate is not much. Carts arriving with cane in the morning, as a rule, go back the same day after unloading their cane and getting payment in cash. Up to this season we had about 9 weighing machines at the gate and the number of carts did not exceed 1,200 per day so that they could be easily managed by our cane staff.

32. Previously we used to get our cane by rail from a distance of 70 miles, but in 1936-37 on account of the fall in the value of sugar, it did not pay to bring cane from such a distance and hence we confined our activities to a distance of about 40 miles only. Railway cane, where it has not to cross a junction station, is usually four days old, *i.e.*, it is not as fresh as cart cane. We have always found that wagon cane is more dry and deteriorated and its purity is lower than that of cart cane. The Rohilkund and Kumaon Railway runs special cane trains and gives us a pool of wagons whereby cane traffic is very much facilitated. Except that the freight rates of cane on the Rohilkund and Kumaon Railway are comparatively high, we consider the railway arrangement not unsatisfactory.

33. On the Rohilkund and Kumaon Railway the rate is Rs. 8 per four wheeled wagon of 12 tons for any distance up to 25 miles and for every additional mile, the freight charged is five annas per wagon. On this railway, there has been no change in freight up to January, 1937. Of course, factories suffer when wagons are not properly loaded and carry less than the weight they are intended for; and, in such cases, the flat rate works to our disadvantage; but on the whole, we consider that for a bulky commodity having not much value the wagon rate is preferable.

34. As limestone has to be brought either from Marwar or from Katni and Satna, the freight per maund comes to as much as the original price of lime at the quarry. We are of opinion that this rate requires reduction.

35. We have no tramways to serve our factory.

36. The tramway scheme is generally advantageous and we would welcome it because, at present, to bring cane from a distance of over 12 miles

the total cost comes to about two annas per maund. The tramway could easily bring in the cane in a lesser time and at less than half the cost. In laying out a tramway along the District Board roads, the permission of the District Board is necessary as also the sanction of the Local Government is required.

37. Generally, carts bringing cane to our factory do not come from a longer distance than 10 to 12 miles and they do not take more than one day to reach the factory from the field; this cane is therefore comparatively fresh but in the case of cane coming to railway stations, from where the factory brings it in closed wagons, the deterioration is real on account of the cane lying exposed to the sun on the railway platform, insufficiency in the number of wagons for loading cane leading sometimes to a carry over of surplus cane to another day and thirdly the fermentation that results from cane being loaded in closed wagons. We have, at times, noticed the impurity of rail-borne cane to be as low as 62.

38. In the season 1936-37, we purchased our gate cane direct from the cane-growers and this system we mean to continue. We took all our rail-borne cane through the Co-operative Societies and also contractors or agents.

39. In previous seasons, we used to give money as advances to cane-growers but we discontinued this system in 1936-37.

40. Where cane is purchased through agents, we pay them a commission of quarter anna per maund of cane purchased through them.

41. In 1936-37, we took about 1,500,000 maunds of cane out of a total crush of 4,500,000 maunds from the Co-operative Cane Suppliers' Associations and we paid them a commission of quarter anna per maund.

42. All gate cane is paid for in cash on the spot on the same day. As regards rail-borne cane, on account of difficulties of keeping cash in out-lying stations, payment is made once a week with the permission of the Collector of the District. Our arrangements for weighing cane are by cart weighbridges kept at the factory gate and also at out-stations. Each weighbridge is capable of weighing three tons at a time.

43. In 1933-34, we purchased cane according to the market rate and, as the price of sugar was then comparatively high, and there was no excise duty it did not matter much to us given though the average price of railway and gate cane worked out to seven annas per maund. From 1934-35 to date, we have been paying at minimum prices as fixed by the Government of United Provinces from time to time.

44. We generally calculate, having regard to the price of sugar, at what rate it will pay us to bring cane to the factory when there is a shortage of supply. If it pays us to do so, we offer something more than the minimum price; as it is a question of keeping the factory going for some time longer or closing down. The United Provinces Government fix the minimum price of sugarcane according to the price of sugar is high, the price of cane is also increased and *vice versâ*.

45. The production of Khandsari sugar is declining and the production of gur is so much increased that cultivators find it profitable to sell their cane green to the factory, the return from doing so is always better than by making gur or *rab*.

46. The price of gur and *rab* have been declining as the area under cane cultivation has been increasing and hence there have been no violent fluctuations upwards or downwards of these commodities in our area.

47. In previous two seasons, in some places, we paid something more (½ anna to 1 anna per maund) than the fixed minimum price towards the end of the season when sufficient cane was not available, because it paid us to do so.

48. The basis on which the minimum price of cane is to be fixed should, in our opinion, be the cost of cane raising to the grower *plus* a reasonable margin of profit for him. Below this, the price should not be allowed to

go. If the figure which will enable efficient factories to work only when the cane is ripe, there will be less output and the price of sugar will automatically rise. Under no cidcumtsances should factories be allowed to work in the month of November when cane is not ripe and also after the 25th April when cane becomes over-ripe and purity of cane falls rapidly. By taking these measures, production will be curtailed and factories will be having high recovery with low production costs. It is only when prices of sugar are inflated unduly that it pays factories to work with unripe or over-ripe cane and as it is not in the interest of the community as a whole this practice should not be encouraged.

49. As there is overproduction of sugar in this country, there is no point in increasing the output by encouraging early or late varieties. These varieties are encouraged in those countries where conditions are different. Take a country which exports sugar profitably. It will pay that country to have as long a season as possible. Besides that in India the period between planting of cane in February/March and harvesting for early crushing is hardly eight months and it is difficult to get early canes with good sucrose and high tonnage for cultivation in Northern India. Further, late cane also will not be much favoured because coming of the hot weather with dry hot winds creates a lot of difficulties in the working of the factories. Such conditions are absent in other countries. It is also very difficult to check the tendency of the growers in their anxiety to clear the fields as soon as possible to mix unripe late cane with medium cane and put the factory to a loss.

50. We give below the dates of starting and closing the factory during the last four seasons that we worked:—

Season.	Period of working.	Duration of season. Days.
1933-34	27th November, 1933 to 21st May, 1934	175
1934-35	21st November, 1934 to 27th April, 1935	158
1935-36	23rd November, 1935 to 6th May, 1936	166
1936-37	19th November, 1936 to 27th April 1937	160

We consider the period 1st December to end of April sufficiently long for economic working.

51. In our area, it is not possible to extend the crushing season by the introduction of early cane as cultivators, at that time, have to reap their monsoon crops of rice and have to plant their wheat crop. Until they are free from these operations, they do not bring in cane to the factory. As they generally keep 2 to 3 ratoons, they want to have their lands cleared by the end of March; hence, even if they are given late ripening varieties, they will cut them before the due time and send them to the mill and put the factory to a loss.

52. The Imperial Council of Agricultural Research depends upon the Central Government for finance to assist cane research and when the Central Government is short of funds, one can expect much help from that quarter. The peculiar position at present is that the Provincial Government whose interests are closely connected with the sugar industry do not get the Excise Revenue, but it goes to the Central Government. Recently, the Central Government have allotted some portion out of the excise duty to the Provincial Governments for improving cane cultivation, etc., and the local Agricultural and Co-operative Departments have framed a scheme to do intensive work in the vicinity of factories with some contribution from them. We have joined that scheme which is now under operation.

	During working season.	Off season.
53. Skilled labour, and unskilled labour	Between 1,200 to 1,300	125 to 150

54. Our Chief Chemist is from Java and we have four skilled Chinese Panmen. The remaining skilled staff are Indians and trained factory labour comes mostly from Gorakhpur and Chapra side.

55. We have not yet replaced foreign skilled labour.

56. We have built bungalows for (1st class) officers, good quarters with three living rooms, store room, kitchen and bath room with enclosed courtyard for second class officers, two rooms quarters for those drawing about Rs. 100 and ordinary quarters for other workmen. Free electric light and fuel are supplied. Hand pumps are supplied for water. There is free medical attendance and supply of medicine to the factory employees and their families, the factory having engaged a qualified doctor who lives in the factory compound. Good lawns and gardens with tennis courts and badminton courts are provided for the recreation of the staff. There is also an employees' club where newspapers are available for reading. Games are also encouraged by the management.

57. During the first two seasons we had to use *extra* fuel, but during the last two seasons we were able to do without any extra fuel and even saved a large quantity of bagasse. We bale our surplus bagasse. Cost of coal and wood burnt in the first two seasons is given in the balance sheets. It may be mentioned that we supply free wood fuel to all our staff and workmen while coal is required for the starting of the factory and also for the steam locomotive that hauls day and night our cane and sugar wagons.

58. The by-products of our factory are (*a*) filter press mud, and (*b*) molasses.

59. In the 1st season we did not weigh our molasses and so we are unable to give the figure. In the 2nd season our output of molasses was 120,768 maunds. In the 3rd season it rose to 174,250 maunds while in the 4th season which has just ended the output was 148,500 maunds. The average production of molasses per 100 cane was 3·45 in 1934-35, 3·96 in 1935-36 and 3·3 in 1936-37. The increase in the total quantity of molasses is due to the increased quantity of cane crushed.

60. We have no market for our molasses and the Railway Company does not provide tank wagons for molasses. The freight rates from our factory to Calcutta and Bombay are very high as compared with the value of the Stuff itself.

61. We drain all our molasses in the rainy weather into the river and it is not a practice which we would like to continue as molasses is an important by-product which can be put to a variety of uses. The principal one is the production of industrial alcohol which can be mixed with petrol in certain proportions and gives good results in the running of automobiles. In other countries like South Africa, *i.e.*, Natal, Australia and on the Continent, the principal use of molasses is in this way. The State require the sellers of petrol to mix it with a certain proportion of alcohol made from molasses and, in this way, the difficulty of storing molasses and the offensive smell it gives when fermentation takes place and the difficulty problem which arise with the Health Department authorities are avoided. In India also at the Mandya Sugar Factory in Mysore, molasses is put to this use and it has given satisfactory results. We would therefore strongly request the Government to give all facilities to the factories in British India for converting molasses into motor fuel. There are other uses also to which molasses can be put, *viz.*, the manufacture of rum, mixing it with cattle food, use as a manure and as a binding metal for roads, but these will not solve the whole problem as thoroughly as the production of industrial alcohol.

62. At present, we have no outlet for our surplus bagassee but we burn it in the off season in our furnace when boilers are working and also in the beginning of the season. We understand that experiments have been tried at Dehra-Dun Forest Research Institute to make cardboards and wood like celotex from mixture of bagasse and bamboo chips. Until the whole

thing is tested on a commercial basis and it is known at what price bagasse can be purchased by a factory manufacturing such cardboards and brown papers, the position, we are afraid, will remain as at present.

63. Filterpress mud can be put to a manurial use and Agricultural Departments should test the application of this mud to different types of soil into neighbourhood of factories and demonstrate its use to the cultivators if found satisfactory.

64. Sugar stocks at the beginning and end of each crushing season were as under: —

Season.	Beginning. Bags.	End. Bags.
1933-34	...	14,769
1934-35	9	31,915
1935-36	...	58,551
1936-37	1,756	73,099

65. We have got two godowns for storage of sugar in our factory. The storing capacity is 50,000 bags. In exceptional cases, we store the bags in the empty spaces in our factory and also in office buildings within the factory compound. We increased the storage capacity in the second season of our working but since then we have not done so; but we are contemplating the erection of another godown.

66. Our sugar does not deteriorate or suffer damage in storage as the godowns are pucca and we take steps to cover the floor with moisture-absorbing material on the top of which we place bricks and thereon planks. It is over these planks that the bags are stored. The great thing is to keep the godown and all the windows closed so that the moist air of the rainy season may not enter and cause mounds and other bacteria to grow. Of course, the roof must be leak proof so that no rain water may get in. As our sugar passes through the hot dryer and is then conveyed to the top floor for filling in bags, by which time it is thoroughly dry, the sugar keeps well during the rainy season. It is only in the lowermost layers which are pressed by the layers of bags above that some solid blocks of sugar are formed in the rainy weather. The sucrose percentage of our first sugar is 99·7 with moisture only 0·73, while our sugar No. 2 has sucrose percentage of 99 and moisture percentage 0·1. It is this low moisture percentage that enables us to keep our sugar in good condition when stored. We may add that our sugar is double cured.

67. The damaged sugar we generally sell as such in the market at lower rate. We do not re-condition it.

68. The keeping quality of sugar depends upon the percentage of moisture and the molasses firmly adhering to it. If double curing is properly done, and the purity of existing molasses be brought down to 31 and 32, there would be less complaint about deterioration of the quality of sugar in the rainy season provided, of course, good pucca godowns with a high plinth are built and sugar is stored in them.

69. Sometime when it is raining, railway wagons come in wet and sugar bags loaded in them become moist and sugar may form clods. In some factories loading arrangements are also unsatisfactory, there being no covered shed over the portion where sugar wagons are loaded. Sometimes, at Junction stations in the rains when bags are to be transferred from one railway line to another, they get wetted and sometimes leaky roofs of wagons are also responsible for spoiling the bags.

70. At times, there is very heavy demand on the railway for wagons and for other traffic when there is difficulty in getting the full number of wagons. Otherwise we generally get wagons for transporting sugar as required. Of course, we have to give previous intimation to the railway stating that we would be requiring a particular number of wagons on particular days.

71. We have no suggestions to make.

72. The average net price of sugar sold by our factory during the season 1933-34 worked out at Rs. 8-14-2, in 1934-35 at Rs. 8-10-3, in 1935-36 at Rs. 8-11-2, while in 1936-37 the average will be about Rs. 2 per maund less as the present selling rates are not more than Rs. 6-10 per maund *ex*-factory. The freight rates to the markets we supply, *i.e.*, Punjab towns, Cawnpore, Agra, Muttra, Delhi, Northern division of the Bombay Presidency and Bombay City proper, are shown in the list attached.

73. Please see copy of the balance sheet of the first three seasons submitted herewith. For the season 1936-37, the balance sheet will be prepared after the year closes on 31st July, 1937.

74. The amount for depreciation as shown in the balance sheet has been the same as allowed by the Income-tax Department.

75 & 76. The information can be gathered from the balance sheet.

77. Our working capital is provided by our Managing Agents and they charge us interest at the bank rate.

78. The annual amount of our Head Office expenses and the Managing Agents' commission in the past three years are as per balance sheet sent to you before.

79. 10 per cent. dividend is, in our opinion, a fair return on capital invested on industries in this country.

80. Factory recovery per cent. has been 8·8 in 1933-34, 9·18 in 1934-35, 9·43 in 1935-36 and 9·65 in 1936-37. Our total losses of sucrose were 21·10 in 1934-35, 20·04 in 1935-36 and 19·46 in 1936-37, which shows that our efficiency is on the increase. We have also been reducing our cost of manufacture consistent with efficient working.

81. We extended our plant from 800 to 1,200 tons and thereby we have lowered our cost of production. We have installed efficient machinery from the very beginning and have, since then, been adding the latest improvements such as Seed Crystaliser, Quito Meter, etc., and we have been constantly effecting economies by reducing our fuel bill as well as the use of lime, sulphur, filter cloth, etc., and by reducing our stoppages to a minimum.

82. We believe that there is room for further improvement in the recovery per cent. of sugar if we confine ourselves only to cart cane. This we can do if we are guaranteed that within our zone no other factory would be allowed to purchase cane, so that we may get all the required supplies of cane from the neighbourhood of the factory by carts and dispense with rail cane on which we have to depend at present for 50 per cent. of our total crush.

83. The number of sugar marketing centres in which our sugar is sold are the Punjab towns, Cawnpore, Agra, Muttra, Delhi, Ahmedabad, Mehsana, Patan, Baroda, Surat and Bombay.

84. The factory sells sugar through agents who are paid 1 per cent. commission on all orders received through them. Very rarely sugar is sold direct to dealers on terms settled with them.

85. The Contract form first issued by the Sugar Mills' Association was reported to be not quite fair to Sugar Merchants and so was subjected to scrutiny at the meeting held at Calcutta between the Indian Sugar Mills' Association and Sugar Merchants in January, 1937, and excepting on one point, unanimity was reached as to the modifications required in the then existing contract form. It is very desirable that the contract form fair both to the manufacturers and merchants should be adopted.

86, 87, 88, 89 & 90. Sugar dealers are in a better position to answer these.

91. Some factories produce sugar which is as good as Java sugar but a large majority produce sugar which has small and irregular crystals and whose colour standard is also lower than Java whites.

92. As dealers generally make hand to mouth purchases, factories have to carry stocks of unsold sugar during the died season. We have no arrangements with Banks or other financing agencies for carrying our stocks of sugar as our Managing Agents supply the funds if and when required. Some factories have arrangements with Banks, but we have none.

93. We consider that a marketing survey would be advantageous. It should show the consumption or distribution of sugar in all Indian towns and cities and the local municipal or other toles levied on sugar so that we may know what price the consumer actually pays.

94. We favour a Central All-India Selling Organisation but the difficulty is that sugar produced by different factories is not of a standard quality and the selling organisation will have to make some arrangements for financing most of the factories up to the extent of the actual factory cost of the sugar entrusted to it for sale. Without some financing arrangement, the system will not work, because, there are weak manufacturers who, in order to realise monies, throw their goods on the market at whatever price they can fetch and thus pull down the prices. If such weak holders are financed by the Organisation and if a proper geographical distribution of markets be made by that Organisation, as for example, Meerut side mills and the mills on Rohilkund and Kumaon Railway to sell in the Punjab, Sind, Rajputana and Northern Gujarat; Central United Provinces mills to sell in United Provinces, Bundelkhand, northern and southern portions of Central Provinces; Gorakhpur and Bihar side factories to sell in Bengal, Bihar, Assam and eastern coast of Madras Presidency; mills in Bombay Presidency to sell in Bombay Presidency and Berar; while Madras mills to sell in the interior of Madras Presidency and His Exalted Highness the Nizam's Dominion, there would be no dumping of any market and reasonable prices will be maintained.

95. We are in favour of the standardisation of Indian sugar; because a lot of difficulties are created in trade by the absence of definite standards. The basis for standardisation should be both the size of the grain and colour of the grain.

96 & 97. As we manufacture a very large portion of our sugar in two grades, No. 1 and No. 1-A, which can be very easily distinguished by any lay man, we have not yet felt the necessity of selling on sugar standards of the Sugar Technologist.

98. The main difficulty of sugar trade in India is the absence of a futures of terminal market where factories can hedge their sugar, and save themselves against losses if the market decline in future. The position, at present, is that a factory purchases its cane in January at a price of sugar which was prevalent in the previous fortnight and the factory is not able to sell that sugar because there are no big merchants but has to sell it months after when the prices may have declined. It is thus sure to be landed in a loss. A manufacturer should always be in a position to purchase his raw material at a price based on the selling prices of his finished product on that day in the terminal market. His concern is to get the cost of manufacturing and his margin of profit on the finished product as he markets in advance on the selling price then ruling. It is not for him to wait with a view to profit by the fluctuations in the market which may occur afterwards. The difficulty in establishing a futures market in India is—

(1) want of standards quality of sugar, and

(2) want of ample godown space for stocking.

Cawnpore which has hitherto been the principal centre of sugar trade in northern India has no facilities for godowns. There should also be banking facilities to enable the purchasers to work and to carry stocks. From this point of view, Bombay seems to be a more suitable place for such a market. In fact a move was made in the current year to start one such market in Bombay.

99. Our estimate of the normal consumption of sugar in India is 800,000 tons of factory made sugar and 250,000 tons of Khandsari sugar and sugar refined from gur. Before the depression came in the consumption was increasing at the rate of about 30,000 tons a year, but at present, even though population is increasing and sugar is now selling cheaper than before, yet the production of gur has so much increased that its price is very much lower and so the expansion in the consumption of sugar is not being maintained as before. We are aware that the habit of tea drinking is increasing and that means more use of sugar but we do not think that the pre-depression figure of 30,000 tons as the annual increase in consumption is now exceeded.

100. In the country-side, the use of cheap gur is still prevalent in making home preparations of sweetmeats. In towns and cities where Khandsari sugar was previously used, its place has now been taken up by factory sugar and so the production of Khandsari sugar has declined. Before sugar factories in India increased in number, orthodox people used to take Khandsari sugar or indigenous refined sugar as they suspected that sugar coming from abroad might not be quite pure; but, now that so many factories started by the Indians are working and as they are open for all to see the several process employed, this prejudice against factory sugar has been weakening.

101. We are aware that one or two sugar factories have taken to manufacture sweets like chocolates, which enables them to get a better profit; but we have no experience in this line and are therefore unable to throw any light on the subject.

102. Import houses will be able to supply the information required under this question.

103. We have no reliable information on this point.

104. Sugar can be exported to Nepal, Afghanistan and the bordering state, but then the trouble is that Java sugar is cheaper to the consumers of Nepal and Afghanistan, than Indian sugar, because, all foreign sugar going to these countries gets a refund of import duty.

105. The Sugar Excise Duty levied in 1934 served to put a brake on the too rapid development of the Indian sugar industry. Factories were unable to pass it on to consumers and the addition made to the excise duties recently would have led to the closing of some mills if the price of cane had not been reduced. The effect, therefore, has been that part of the incidence of the tax has fallen on cane-growers and part of the factories.

106. We have no marketing arrangements for molasses.

107. We have no information.

108. The protection policy of the Inian Government so far as it concerns sugar has been eminently successful as it has led to the growth of the industry so rapidly that within five years the industry is able to supply all the sugar requirements of the country and that too at such a price which effectively stops imports of foreign sugar.

109. The protection has to be continued for another seven years because without protection Java may take steps to crush the industry by lowering its rates for a season or two. As over 20 crores of rupees have been invested in the industry and as explained in the prefatory note the development of the industry has been good from a national point of view and as factories are becoming more and more efficient every year as seen from their recovery percentage figures and from the up-to-date equipment of machinery, it is desirable that protection be continued at such a rate as would force factories to go on improving their efficiency if they want to survive in the competition. The lame ones should not be allowed to continue as a burden on the community. We consider that if the protection is to be effective, any reduction that may be made in the import duty will not enable Government to get any Customs Revenue worth the name. To-day Java sugar is quoted in Bombay at Rs. 15-2 per cwt. while the best Indian factory sugar sells in the city at Rs. 10-12 per cwt. There is a wide gulf between the prices of foreign sugar and of domestic sugar. The reduction of 1 or 2

rupees per cwt. in import duty will not be harmful to factories but what they would most desire is reduction or extinction of the excise duty. Government can realise that much amount if required by taxing other industries which are in more favourable circumstances. At present the sugar industry is in a depressed condition and it is most unfortunate that the recent increase of excise duty has fallen on it.

110. We consider that the State should take more active part in regulating production and stopping the erection of new factories in the country. For reasons already given in the prefatory note, such extension of State activities seems to be justified and would also prove beneficial. The main cost in the production of sugar is of cane and the cane in our country is not of high sucrose content and further, the yield of cane per acre is also very low. If the cultivators could, by the propaganda of the Agricultural and Co-operative Departments, be made to grow 600 maunds per acre by using richer varieties and practising intensive cultivation where they are growing 300 maunds per acre at present, factories would get cane at a cheaper price and at the same time the cultivators would reap larger profits, from cane cultivation. Better technical guidance and advice may be looked for in future with the development of the All-India Sugar Research Institute, Cawnpore. In Java, men of outstanding abilities are employed in such institutes and they command confidence of the factories. It is for that reason that their advice is freely availed of. We trust that the Government of India will do all they can to place this institute on a par with a similar institutes in foreign countries.

Raza Sugar Co., Ltd., and Buland Sugar Co., Ltd., Rampur State.

Letter No. CJ/7/317, dated 12th July, 1937.

I enclose herewith 6 copies of your questionnaire completed as far as possible. I trust that you will forgive the delay in submitting this document to you, which is due, as you are aware, to our Dr. Maxwell, whom we had to consult, being away in Australia.

REPLIES TO GENERAL QUESTIONNAIRE.

1. Raza Sugar Factory started in 1933. Capacity 950 tons.

Buland Sugar Factory started in 1935. Capacity 1,000 tons.

2. Outturn of Raza Sugar Factory:—

—	1933-34.	1934-35.	1935-36.	1936-37.
	Mds.	Mds.	Mds.	Mds.
Superior . . .	67,828	132,520	200,068	320,810
B. quality . .	28,448	39,660	58,550	48,322
Crushed . . .	7,473	4,110	2,157	2,017
1st quality . .	8,563	300	..	..

Outturn of Buland Sugar Factory:—

	1935-36.	1936-37.
	Mds.	Mds.
1st Grade (Superfine, etc.) .	134,382·5	292,722·5
2nd ,, (B quality) . .	38,657·5	64,447·5
3rd ,, (Lumps, rejected, etc.)	6,132·5	3,495·0
	179,172·5	360,665·5

3. (*a*) Factories are advantageously situated in regard to cane but not in regard to raw material such as limestone and gunny bags both of which have to be obtained from distant markets. Most suitable limestone for the Companies is obtainable from Gotan in Jodhpur State but the Bombay, Baroda and Central India Railway has hitherto not agreed to effect a reduction in freight rates on this important commodity.

(*b*) Rail communications are satisfactory but roads are bad necessitating the despatch of all sugar by rail. The absence of good feeder roads has also forced the factories to instal an elaborate tramway system for transportation of cane.

(*c*) Labour is adequate but with little or no industrial experience.

4. Buland—Carbonatation; Raza—Sulphitation.

Advantages of carbonatation over sulphitation—Higher recovery; better quality sugar; easier treatment of refractory juices.

Disadvantages of carbonatation over sulphitation—Higher initial outlay of capital and operating costs.

5. Since the first season, when the initial capacities were about 500—600 tons, extensions have been carried out in successive years increasing both factories to their present capacities.

	Raza.			**Buland.**
	1934-35.	**1935-36.**	**1936-37.**	**1936-37.**
	Rs.	**Rs.**	**Rs.**	**Rs.**
Amount spent in extension to machinery . . .	80,900	25,200	42,300	11,800

6. Extensions contemplated to raise capacities to Buland 1,200 and Raza 1,000.

7. (*a*) Balanced over all efficiency.

(*b*) In India under present conditions not less than 600 tons.

8. Enquiries may be made from sugar machinery firms in Calcutta.

9. Had no occasion to approach either Institution for assistance.

10. Not at present.

11 and 12. Does not arise.

13. None. A State Agricultural department has recently been established and we are co-operating with them to improve cane qualities.

14. Generally we have found that the area has increased 100 per cent. within the last 4 years and the quality of cane is improving every year.

15. During the last four years the cane was once damaged by frost, *viz.*, in the year 1934-35, but its effect was mostly visible on ratoon crops which had not been harvested before January. New crops mostly resisted it. There was no damage by insect pests or other diseases during this period. The percentage of lose through these causes was negligible.

16. Yes, provided outside factories refrain from purchasing in this area. The principal varieties crushed in the factory are Co. 213, Co. 290, and Co. 331, the last two varieties being of recent introduction. The field yield of the first variety is 200 to 250 maunds per acre, and the last two varieties about 300 maunds per acre with an all round average of 11 to 12 per cent. sucrose content.

17. The supply and price at which cane can be obtained is influenced to a very great extent by foreign competitors, especially in the latter half of the season. The circumstances are that during this period most of the western mills come to this area and offer fabulous prices to the cultivators whereby our own supplies are vastly affected. Sometimes these prices become very uneconomical for us as we have to depend on about 80 per cent. of our requirements in our own area. Other mills only purchase with this

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enhanced price upto one to four thousand maunds per day, while it affects us the extent of 48 thousand maunds per day.

18. (*a*) The area has steadily increased year by year.

(*b*) Does not arise.

19. Surrounding crops are adequate for our requirements.

20 and 21. The State Agricultural Department if approached could give you definite information on this point.

22. (*a*) We can offer no useful comment.

(*b*) We favour zoning under official control.

23. Under the zoning system it would be possible to make cane advances, supply of improved seed, and expenditure made on feeder roads.

25. Source of supply.	1933-34.	1934-35.	1935-36.	1936-37.
Gate cane . .	34·27	30·46	31·99	40·53
Light Railway cane	25·98	23·26	16·03	18·34
Rail cane . .	39·75	46·38	51·98	41·13

Yes, owing to development of more area and to better transport facilities

26. Yes, carts only.

No useful information to give.

27. Not adequate. The main roads are mostly metalled, while feeder roads are all *kachcha*, and in very bad condition.

28. Upto about 7 miles, about 24 hours in the case of cart and Light Railway cane.

Practically no protection.

29. About one pie.

30. No. The State has abolished all tolls on raw material for the factories.

31. We employ a special staff for distribution of regulation passes to cultivators, who have received advance, and other cultivators who are expected to deliver their cane at the gate. The normal detension of these carts in the first half of the season is 24 hours, but in the latter part of the season it is 2 to 8 hours at the most.

32. About 25 miles.

36 hours.

Yes.

33. Rs. 10 per 4 wheeler with an average capacity of 450 maunds for a maximum distance of 35 miles.

Upto November 1935 the rates were Rs. 7 *plus* Re. 1 siding charge for the same.

That rate.

34. The Railway freights on Limestone from Gotan (Jodhpur) and Katni are as follows:—

	Miles.	Freight per ton.	Per ton per mile.
		Rs. A. P.	Pie.
Gotan . . .	406	11-12-3	5·6
Katni . . .	361	12-12-0	6·8

All our endeavours to get this disparity rectified have not been successful.

Of Rampur State.

About 1·1 pie per maund per mile.

36. Yes.

No.

37. Not much in the early part of the season upto 24 hours. When the hot weather starts deterioration takes place and also the cane becomes over-ripe which may amount to as much as 1 per cent. recovery per day.

		1933-34.	1934-35.	1935-36.	1936-37.
		Per cent.	Per cent.	Per cent.	Per cent.
38.	Direct .	100	53·49	64·37	77·63
	Agents .	...	46·51	35·63	22·37

39. An agreement to supply cane according to our requisitions.

In the majority of cases we advance them cash, sometimes provide them seed.

40. Appoint agents and pay them a commission of 3 annas per maund for cane purchased and delivered to us.

41. Yes, through the Co-operative Society, Moradabad. Commission of 4 pies per maund, other terms same as offered to other agents.

42. Employ our own staff and use the best make of weighbridges.

Yes.

	Season.	Minimum price paid per maund for cane.		Maximum price paid per maund for cane.	
		As.	P.	As.	P.
43.	1933-34	4	9	9	0
	1934-35	4	9	7	9
	1935-36	5	0	8	0
	1936-37	4	0	4	9

Yes. In the first three seasons prices tended to rise towards the end of the season owing to foreign mills running short of cane and coming to Rampur territory for purchases. In the last season however this did not happen as foreign mills seem to have had enough cane for their own consumption.

44. Rampur State Sugar Cane Rules are the same as those in force in the United Provinces.

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45. This has had little or no effect on our territory to date.

46. No information available.

47. Yes, even upto 12 annas towards the end of a season, due to unhealthy competition on the part of outside mills.

48. In the event of the existing price fixing basis being continued, excise should be deducted from market prices for purposes of calculation and in addition some protection is necessary to cover temporary increases in rates due to sudden speculative fluctuations.

49. "In the present state of the industry over-production caused by lengthening the season is harmful and rather than pay bonuses we would prefer control over planting and length of crushing season."

	Season.	During of crushing season.	
		Raza.	Buland.
		Days.	Days.
50.	1933-34	123	...
	1934-35	145	...
	1935-36	150	150
	1936-37	170	175

In 1936-37 we crushed longer to consume the cane in our area.

We consider 150 days as an economical period for the crushing season.

51. The extension of the crushing season would necessitate the export of a considerable surplus of sugar.

53. Our skilled labour which was recruited during the first season from British India is being gradually replaced by local labour which we have trained during the course of the last four years. All unskilled labour is recruited locally. While the above is the position during the crushing season in the silent season we have only skilled technical labour in our employment which has been partly trained from unskilled labour.

54. The supervising staff, *i.e.*, Manager, Chief Chemist, Chief Engineers, and Chemists-in-charge are imported from abroad whereas our office staff and most of the keymen are imported from different parts of British India.

55. During the course of the past four years we have been able to replace foreign labour in our Engineering, Electrical and Chemical departments in the junior posts.

56. In each of the two factories we have an adequate number of quarters for our labour and coolies; most of these are equipped with electricity and water which is supplied free. Further we have established a Central Hospital and Dispensary equipped on modern lines with a highly qualified staff. A Club house has been provided, and facilities are afforded for tennis, badminton, football, etc., besides the indoor games and a radio set. For the convenience of the staff shops are provided inside the factory compound, and a dhobi ghat also.

57. Under normal working conditions no extra fuel is required in either factory-surplus bagasse produced, which is baled.

	Fuel consumed.	
	Raza.	Buland.
	Rs.	Rs.
1933-34	...	...
1934-35	32,500	...
1935-36	5,200	27,900
1936-37	3,200	5,800

58. Bagasse and final molasses.

	Raza.		Buland.	
Season.	Mds. produced.	Price per md.	Mds. produced.	Price per md.
		A. P.		A. P.
59. 1933-34	54,357	0 3	..	..
1934-35	81,882	1 11	..	..
1935-36	110,292	2 3	74,100	2 0
1936-37	116,590	1 7	99,000	..

There has been a steady decrease in price obtainable for final molasses, which is in our opinion, due to the fact that sufficient final molasses are available from factories near Calcutta to which place pratically all molasses are railed, so that the factories situated at a distance from Calcutta cannot dispose of their molasses on account of the very heavy railway freights. From the Buland molasses produced in 1936-37 we have only been able to dispose of a very small quantity for prices varying from 2 pies to 6 pies per maund f.o.r. tank wagon.

60. Distilleries in Calcutta area, tank wagons supplied by Railway.

No, number of wagons supplied often inadequate.

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To Asansol 5 annas 11 pies per maund, and to Calcutta 6 annas 10 pies per maund.

61. The unsold balance of our molasses is drained off during the rains in *nullas* specially prepared to the river. Our experience is that people are not keen on taking molasses for manure purposes. A small quantity is disposed of every year for mixing with tobacco, a certain amount is sold to distilleries, and during this season a very considerable quantity is still left unsold, and will have to be released when the storm water arrives. The only suggestion we have to offer for the utilization of molasses is the production of power alcohol under Government control.

62. For our baled bagasse in Raza we have an outlet in Rampur itself where we sell it to a local Ice Factory. Bagasse can be utilised for card-board manufacture, and if a central celotex factory is erected there would be an outlet for this surplus.

63. No.

64. Stock of sugar bags:—

	Raza.			Buland.	
	1934-35.	1935-36.	1936-37.	1935-36.	1936-37.
At commencement of season . .	..	..	17,321	..	13,008
At close of season	38,094	43,835	86,684	42,788	60,670

65. *Raza.*—One old godown with a storage capacity of 18,000 bags and one new godown (built after the third season) with storage capacity of 80,000 bags.

Buland—The Sugar is stored in a godown with a capacity of 60,000 bags.

67. Any damaged sugar is invariably reconditioned.

69. During the monsoon months we had some claims on account of damage in transit, which in our opinion is partly due to leaking wagons which are unsuitable for long transit, say from Rampur to Bombay, Calcutta or Peshawar.

70. No.

71. The Railway should supply watertight wagons for sugar the doors of which must be rain proof. Complaints have been received that bags near the door are generally damaged by rain, etc.

72. *Freight rates*—

	Rs.	A.	P.
Amritsar	0	12	8
Ahmadabad	1	0	0
Bannu	1	11	3
Daryakhan	1	7	2
Peshawar City	1	7	9
Kohat Cantonment	1	7	11
Hangu	1	8	11
Quetta	1	6	6
Carnacbridge (Bombay)	1	0	0
Thall	1	10	1
Delhi	0	4	9
Rawalpindi	1	4	2
Kantapokur	0	14	0
Multan City	1	4	0

73. Copies of balance sheets are sent by separate post.

74. Amounts written off for depreciation:—

	Rs.
Raza—	
1934-35	95,900
1935-36	89,400
1936-37	90,000
Buland—	
1935-36	78,300
1936-37	1,11,000

75. In Raza after season 1935-36—Rs. 2,00,000.

76. After season.

	Raza.	Buland.
	Rs.	Rs.
1933-34	75,000	...
1934-35	90,000	...
1935-36	1,50,000	90,000

77. We borrow at 4 per cent. on sugar stocks due to special guarantees.

	Raza.			Buland.	
	1934-35.	1935-36.	1936-37.	1935-36.	1936-37.
	Rs.	Rs.	Rs.	Rs.	Rs.
78. Managing Agent's commission	14,000	44,800	...	19,400	...
Head Office expenses	17,500	15,100	18,300	8,900	18,300

Ten per cent. of net profit.

79. An industrial investment such as a sugar factory should yield at least 10 per cent. on capital investment to make it a reasonable proposition.

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80. Forms* sent separately.

81. From above forms reductions in cost can be calculated as the crushing capacity is shown for each year.

82. Season 1936-37 would appear to be a peak year both in regard to recovery and the quantity of cane crushed and we cannot therefore look for any further reduction of works costs or improvement in recovery rates.

83. See answer to 72 above.

84. Sales are made by one or two guarantee brokers. We have no dealings with retailers.

85. Yes. None.

86. We have no reliable information on this. We suggest Director of Imperial Institute of Sugar Technology be applied.

87. We have no record of retail prices.

88. Except in ports our experience is that dealers have very unsatisfactory strange arrangements.

89 and 91. Our sugar is equal to Java.

90. No information.

92. (*a*) See answer to 64.

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* Not printed.

Regarding arrangement with banks *see* answer to 77 above.

93. Yes.

94. This question raises vast issues impossible to answer. Briefly the experience of the past two years indicates the necessity for controlled and rationalised marketing.

95. Yes, within limits.

96. (*a*) None.

(*b*) We have endeavoured to maintained our standard quality as graded by the Imperial Institute.

97. A material reduction in the price of the standards may tend to popularise them.

99. No useful information to give.

100. No information.

102, 103, 104. This information is with the Director of Commercial Intelligence, Calcutta.

105. The excise duty levied in 1934 produced a steadying influence on the industry and was justified by conditions. The additional excise imposed in 1937, however has fallen entirely on the industry and precipitated the present crisis.

106. We have been fortunate in being able to sell a small quantity of our molasses to Carew & Co., but marketing arrangements are quite unsatisfactory due to lack of demand.

107. We have no information.

108. This protection has been effective in that it has enabled a new industry to develop to an unprecedented extent, and has given employment and a market to millions of cultivators, labour, etc.

109. Owing to vast development in Indian sugar the importation of foreign sugar should be made impossible as it is no longer required.

110. We consider that assistance is required in the shape of rationalization and control of the industry, the development of exports and negotiation of trade agreements. The present state of the industry is sufficient reason for this suggestion.

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The Upper Ganges Sugar Mills, Ltd., Bijnor.

Replies to Tariff Board Questionnaire.

1. Manufacture began in 1933-34, its capacity was 600 tons daily. Now it is 1,100 tons.

2. Output of sugar was as follows:—

	Maunds.
1933-34	97,600
1934-35	187,498
1935-36	328,493
1936-37	468,384

Only one class produced.

3. Our factory is advantageously situated in some respects and not so in other respects.

(*a*) Cane supply at the gate is very insufficient, no fuel or Limestone available hereby.

(*b*) No road or other transport arrangements to bring cane from the interior scarcity of carts. Railway facility fairly good, but there have been long stoppages of the factory due to irregular arrivals of cane wagons.

There have been difficulties very often in securing wagons for export of sugar and air-tight wagons in the rainy season.

(*c*) There is shortage of labour, labour is inefficient and trained labour is unavailable.

4. Double Sulphitation.

5. Extension have been made twice.

(i) In 1934, two mills, one pan, one pre-evaporator, one Doorclarifier, Presses, some Pumps and other additions were made.

(ii) In 1936, four Centrifugals, one pan and other additions were made.

9. We had no occasion to take technical assistance from the Imperial Institute of Sugar Technology.

10. We had a mind to undertake our own cultivation but gave up the idea due to following reasons:—

- (i) Big plots not available.
- (ii) No facility for irrigation.
- (iii) No facility for transport.
- (iv) Enough labour not available.

13. We have tried no experiments but we have joined the Cane Development Scheme of the Government and that Department is introducing improved varieties of cane.

14. (*a*) Quantities received at the gate are:—

	1933-34.	1934-35.	1935-36.	1936-37.
	Mds. Srs.	Mds. Srs.	Mds. Srs.	Mds. Srs.
Brought by growers	299,965 22	454,805 20	59,098 20	1,410,676 10
Brought in the interior and transported by Factory in carts . .	569 16	67,423 10	273,893 32	384,922 31

The quantity at the gate and also at outstations have increased during the last four years.

(*b*) In 1934-35 quality was very poor due to insufficient rain and frost, in 1935-36 and 1936-37 rains sufficient and timely and quality improved.

15. Cane is liable to frost, red rot, white ants. No estimate of percentage of loss can be given.

16. No. In some seasons we had to bring cane from distance over 150 miles. This could be avoided if irrigation and transport facilities are made available to the cultivators in the vicinity of the factory.

Generally Co. 213 is crushed.

17. Towards the end of the season when factories on the North Western Railway start purchasing cane on the East Indian Railway stations, price have gone up to even 8 to 10 annas per maund.

18. (*a*) The area has increased considerably because sugar cane is more paying to the cultivator and he gets ready cash competition among the factories which gave 8 annas to 10 annas per maund for cane was an additional reason for increase of cane production.

19. The production in our factory area from where it can come by carts in this year hardly 30 per cent. of our requirements and in previous years it was much less. We had to take the remaining quantity from the Moradabad District and other places in the Bijnor District and no cane has been left over in Western United Provinces. Therefore no restriction is necessary. What is required is the development of proportionate quantities of early medium and late varieties and especially in the areas round

the factories. This is much more important in cane of our factory than in case of other factories as our requirements are large nearly 60 lakh maunds and the available supply very poor. We have to purchase cane from 50 to 60 railway stations. The problem in our area is not of any restriction, but of development and encouragement in the neighbourhood of the mills to save cost of transport and to improve recovery and thus bring down the cost of production for the consumer.

21. Cultivators difficulties:—

(*a*) In growing cane—

(i) Want of irrigation.
(ii) Want of sufficient manure.
(iii) High cost of canal irrigation wherever it is available.

(*b*) In delivering cane to Factory—

(i) Want of roads.
(ii) Insufficiency of carts.
(iii) High carting charges.

23. If payment is guaranteed, we can assist the cultivators by advancing funds or seeds, manure, etc.

		1933-34.	1934-35.	1935-36.	1936-37.
		Pies.	Pies.	Pies.	Pies.
25.	Gate cane . . .	23·4	19·61	16·5	28·33
	Cart (Dehat) cane* .	00·04	3·3	7·6	7·73
	Rail cane . . .	76·56	77·09	75·9	63·94

26. Only carts are used. Average weight 15 maunds.

27. There is only one metalled road, from Seohara to Tajpur. The condition is generally bad, there are no feeder metalled roads. There is only one *kacha* road connecting Seohara to Dhampur. The roads to the villages are practically no roads and even slight rainfall makes them unpassable.

28. Generally cane is brought from 5 or 6 miles, but this season some cane from 8 or 10 miles. Average time taken between cutting cane and delivery at the factory is 12 to 24 hours. There is no protection from deterioration during transport.

29. Cost of cartage is approximately 2 to 3 pies per maund per mile. Some cultivators use their own carts others hire carts 2 to 3 pies per maund per mile.

30. Tools are charged for crossing the Ramganga Ferry.

31. We issue challans 24 hours in advance to the cultivators who bring carts according to indents. Carts have not to wait more than four hours normally. We keep the weigh-bridges and cane office open all the 24 hours.

32. Normally we get rail cane from upto 80 miles but towards the end of the season we go over 150 miles. The time taken between cutting of cane and delivery at factory varies from 3 to 6 days. The Railway arrangements are not quite satisfactory. There is no guarantee of timely arrival of trains, and so there is always a risk of cane shortage or of cane accumulation. We lost about 60 hours of crushing due to the Railway irrigularities and on many occasions accumulation, causing deterioration of cane and bills for demurrage.

33. We prefer flat rate. The rates of East Indian Railway were decreased in 1934 and were again increased in 1935. In 1937 rates have been decreasd towards the end of the season for long distances at the suggestion of the Government of help cultivators to finish their crop.

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*Cane purchased in the interior and transported by carts at factory expenses.

35. We have no Tramway.

36. Tramway system is advantageous to the Industry and also to the growers. The growers get cheap transport facilities, many places which are inaccessible are enabled to send their cane to the factory. The interior tracks get developed and the factory is assured for fresh supplies of cane. The cultivation of cane can be properly controlled so that there may no excessive production. The Hydro-Eelectric Department can conveniently construct a tramway as they have done at Daurala. That will also mean the sale of their current.

37. The deterioration in hot months is as high as the loss of 1 per cent. sugar on cane.

38. Cane purchases—

	1933-34.		1934-35.		1935-36.		1936-37.	
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.
From growers .	791,223	14	2,081,634	21	1,820,758	32	3,533,679	14
Through contractors	490,688	17	237,165	8	1,759,120	34	811,021	0
Through Co-operative Society. . .	*Nil.*		*Nil.*		*Nil.*		634,214	3

39. We do not bind cultivators.

We advance cash to needy against their crop. Seed and manure are advanced by the Cane Development Department.

41. We got part of our supply during 1936-37 from the Co-operative Society.

42. Weighment and payment at the factory open all 24 hours. Payment daily at all purchasing centres.

43. We bought at Government minimum prices at out-stations and paid premium upto one anna per maund at the gate. Price increased towards the end of the season due to competition.

44. Prices are fixed by Government of the price of sugar.

45. If the prices of gur or Khandsari sugar is low, cultivators do not crush in *kollus* but bring to the mills.

47. We have paid in excess at the gate to meet the competition of Khandsaries and at out-stations due to competition among the mills.

49. It is not possible to check inferior qualities coming in as superior ones.

50. Duration of season—

	Days.
1933-34	147
1934-35	134
1935-36	161
1936-37	194

51. Season can be extended to at least seven months.

52. We are not satisfied with the assistance given by the Government Department as no sufficient attention given to our requirements. The Government have done nothing to improve the village roads and practically nothing for irrigation as compared to the neighbouring districts of Moradabad and Badaun. There are more than 500 tube wells in each of these districts where there is not a single sugar mill, while round our factory with the requirement of 60 lakh maunds of cane, it is only now that two or three tube wells have been sunk. The result of this thoughtless policy of the Government has been that the grower in Moradabad District was put to great hardship for the disposal of his cane during the last season,

while the factory was unable to get fresh cane for crushing. The Government Departments have been indifferent, in spite of repeated requests.

53. In the crushing season we employ—

(i) Skilled labour such as fitter and mistries, panman, centrifugalman, etc.

(ii) Coolies.

In the silent season we employ—

(i) Fitters and mistries.

(ii) Coolies.

54. Only the Chief Engineer and the Chief Chemist are Europeans, all others are Indians. The Indian skilled labour comes from all provinces of India, the manufacturing department mates are mostly from Bihar.

56. We provide housing accommodation for labour. We have provided quarters for labour. We provide free medical aid and employ a qualified Doctor (M.B.) for the purpose. There are arrangements for outdoor games also.

57. At the start and finish we have to use coal and wood, otherwise bagasse is sufficient for our purposes.

58. The Bye-products are molasses and Press cake.

59. Outturn of molasses—

	Maunds.	Per maund.	
		As.	P.
1933-34	31,210	1	7·2
1934-35	57,994	1	9
1935-36	151,653	1	8·5
1936-37	176,665	unsaleable.	

on part of production was sold.

60. Molasses used to go to the Punjab and parts of United Provinces in tins as tank wagons are not available for these places.

Freight rates are as under:—

	As.	P.		As.	P.
Pathankot	5	8	Baijnath Papola	8	11
Nurpur Road	6	2	Palamput Punjab	8	3
Ambala City	3	9	Jugindranagar	9	5
Ludhiana	4	3	Jammu Tawi	6	9
Gurdaspur	5	6	Jhelum	8	9
Nagrota	12	6	Narowal	5	0
Jullundur City	4	6	Nawashahr Douba	4	9
Kotdwar	2	4	Chak Amru	5	10
			Simla	5	10

61. The molasses have to be thrown away in the waste water drain. Power alcohol should be allowed to be manufactured.

64. Stock of sugar—

	Beginning of season.	End of season.
	Maunds.	Maunds.
1933-34	...	13,033
1934-35	...	65,663
1935-36	...	194,127
1936-37	13,237	110,226

65. We have three sugar godowns. The first was made in 1933, the second in 1934 and the third in 1937, we can store about 9,000 tons sugar.

66. No damage is caused to the sugar.

70. Yes. The wagons leak during the rains damaging the sugar, very often we experience difficulty in obtaining wagons for export of sugar.

72. Delivery at Factory—

	Maximum price.			Minimum price.		
	Rs.	A.	P.	Rs.	A.	P.
1933-34	10	8	0	8	0	0
1934-35	9	4	0	8	8	0
1935-36	9	7	0	7	4	0
1936-37	7	11	9	6	4	0

Freight rates:—

	Rs.	A.	P.		Rs.	A.	P.
Amritsar . .	0	11	1	Sangla Hill . .	0	14	5
Jullundur . .	0	9	5	Peshawar . .	1	6	4
Sargodha . .	1	0	11	Shah Jewana .	1	0	7
Gujrat . . .	0	14	8	Lahore . .	0	12	3
Rawalpindi . .	1	2	6	Khanewal . .	1	1	5
Gujarkhan . .	1	1	4	Jhang Maghiana	1	2	5
Bannu . . .	1	9	8	Jammu Tawi .	0	14	6
Ferozepur . .	0	10	11	Tobateksingh .	1	1	1
Moga . . .	0	9	8	Khushab . .	1	1	11
Ambala . .	0	6	1	Lyallpur . .	0	11	9
Kohat . . .	1	6	4	Multan . .	1	2	5

73. Copies of balance sheets are enclosed.

74. Figures are given in the Balance sheets. Depreciation has been written at the scale allowed by the Income-tax Department.

75 & 76. Please see the Balance sheets.

77. Working capital is provided by the Managing Agents at 3½ per cent. per annum.

82. There is room for reducing the cost of production by providing facilities to the cultivators for producing cane of improved varieties in the vicinity of the factory to meet its full requirements. Fresh improved cane at the gate, will save transport charges and improve the recovery of sugar.

The Dhampur Sugar Mills, Ltd., Bijnor.

1. Factory started to manufacture sugar in the year 1933. Its rated capacity is 600 tons.

2. Output of sugar for the last three years:—

Year.	Sp. (A).	Sp. (B).	1st.	1st (A).	Total Bags.	Total.	
						Mds.	Srs.
1934-35 . .	..	..	59,162	338	59,500	160,507	20
1935-36 . .	..	..	84,428	879	85,307	231,383	22
1936-37 . .	1,053	4,681	118,597	734	125,065	312,662	20

3. The factory is so situated that every raw material as regards cane, lime, etc., can be easily obtained and sugar market for the factory in Punjab which is very near, about 150 miles. It enjoys facilities of rail and road and has got adequate labour supply in the vicinity.

4. It is a sulphitation factory. The cost of sugar production is cheaper than the carbonatation factories but the quality is a bit inferior to the quality that is turned out in carbonatation factories.

5. The following changes have made in the plant:—

Year.	Machinery Installed.	
1935	Filterpress	One 38″ sq. 36 chambers.
	Pump	One 8″ × 6″ × 8″.
	Subsiders 2nd	Four 8″ × 4″ × 4″.
	Syrup ranks	Four 8″ × 7″ × 8″.
1936	Subsiders 2nd	Four 8″ × 4″ × 4″.
	Filterpress	Two 38″ sq. 42 chambers.
	Centrifugals	Four 18″ × 36″.
	Pan	One dia. 9 ft. 6 inches.
	Dryer	One.
	Sulphiting tanks	One 1,200 gallons.
	Crystalliser	One.
	Rollers	Two 26½″ × 56″.
	Scrapers	Two.
	Mitchles traps	Four.

Replacements.—Duplex pump for centrifugals was replaced by two stage pumps to drive the centrifugals, and 3 small pumps were replaced by Mitchles traps.

The total cost upto date is Rs. 1,50,000.

6. Further replacements of compressor engines and Injection water engine have been put in hand for the year 1937 with a cost of about Rs. 25,000 while two sulphiting tanks, one sulphur furnace and almost sulphur pipes will have to be replaced. Six rollers are to be reshelled, trash bare and all scrapers are to be replaced.

The management is not in favour of further extension as regards capacity of the mills but is in favour of purchasing new machinery which may improve the efficiency and working of the plant.

7. The overhead charges and permanent establishment of a factory determine the economic size of the plant. The larger the factory the less the proportionate charges on skilled labour, etc. The size, of course, is determined by the capital available, availability of raw materials, etc. In our opinion 400 tons plant can be operated economically.

8. Ordinary tanks, piping, and simple machinery can be obtained in India, while centrifugals, boilers, evaporators, pans and engines are yet to be imported from outside.

9. So far the Imperial Institute of Sugar Technology has not given any important assistants to the Sugar Industry, but the Agricultural Department of local Government has done sufficiently to improve the varieties, to increase the cultivation of cane.

10. Our Company does not undertake the cultivation of cane.

11, 12, and 13. *Nil.*

14. During the last four years the availability of cane has been increasing every year and the quality of cane has also been increasing.

15. Nearly 75 per cent. of the cane grown is liable to be damaged by frost and 35 per cent. of cane is liable to be damaged by deceases, pests, etc.

16. Our factory is assured of sufficient supply of cane and the common variety is Co. 313.

17. Now the cane is so much that there is no fear of competition by other factories.

18 and 19. The area under cultivation has been varying, but it has been successively increasing as cane growers were noticing the huge demand by the factories.

Towards the end of the season as there was shortage of cane supply, prices of cane used to go up pretty high due to internal competition by the factories and this proved a lure for the cultivators to grow more cane but in 1936-37 the cane was excessive, and the factories could not consume the cane till the end of May but the cane due to climatic conditions deteriorated and was not profitable for factories to crush it; therefore, the Government had to lower the prices. The other reason for the excessiveness of cane in this season was that the price of jaggery was also low this season.

20 and 21. *Nil.*

22. We are in favour of allotting areas for the supply of sugar cane and it is better if zoning is done, so that individual factories will try to improve cultivation and also cultivate it to their requirements.

23. We have already put a tramway track of about 19 miles in different directions and the directors have acquired about 6,000 acres of land for cane cultivation out of which 2,000 acres have been brought under cane cultivation and they are ready to distribute cane seed and manure to the cultivators.

24. Nowadays every factory is at least crushing 25 per cent. to 50 per cent. in excess to its rated capacity and we are of the opinion that the over-production can only be decreased if one board is appointed by the Government which should fix the capacity of the factories and then the factories may be asked to crush only a quantity of cane. Otherwise if this over-production is not reduced most of the factories will go into liquidation, as they for economy will be compelled to employ cheaper staff which will not be so efficient, and bigger factories will get better results as they will be able to engage best experienced staff.

Year.	1934.	1935.	1936.	1937.
Gate cane	25·0	25·0	13·5	27·7
Tram-borne cane	Nil.	Nil.	21·0	32·4
Rail cane	75·0	75·0	65·5	39·9

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26. Average weight of cane per cart is about 15 maunds. We have done the experiment of using the Dunlop Tyres on the carts and seen that the carts can easily carry 50 maunds, of cane, but the cultivator being poor cannot afford it, unless some factories give advances to cultivators against cane.

27. Mileage of road in the vicinity is adequate, but the condition of roads is not good. When it rains then the factory is not sure of the cane supply. However if the roads are properly levelled and culverts are built in the feeder roads for the flow of water then these may prove helpful to both the cultivators and the mills.

28. The cane upto 6 miles is brought by carts and cut cane is delivered after 12 to 24 hours after its having been cut. The cane cannot be protected from deterioration during transportation.

29. The cost of transport of cane per cart mile has not been determined. Some cane growers have to hire carts and the average cost of hiring is one pice per mile of one maund of cane.

30. *Nil.*

31. We distribute before-hand passes for the gate cane and we purchase the same cane for which the passes have been issued. As this was the first year for the adoption of this system the sellers were not habituated to it, but we hope it will work quite smoothly without any botheration to cane suppliers. The normal period for detention for each cart is about ½ to 1 hour. As the carts come in lines, they are weighed one by one, and we get about 400 to 500 carts which take about 10 to 12 hours to weigh, to unload, etc.

32. Up to 60 miles cane is transported by rail to factory. Average time taken between cutting the cane and unloading at the factory premises is from 3 to 5 days. The railway arrangement for transport of cane is not satisfactory. Sometimes the cane is delivered after 4 or 5 days of its booking which could be within 24 hours after its booking because 60 miles distance is not much it could be covered within 24 hours.

33 and 34. *Nil.*

35. About 19 miles of tramway serve the factory and average cost of transport of per maund of cane is one pice per mile which is borne by the grower. We consider tramway system advantageous if there are no good main and feeder roads, otherwise there are difficulties in laying a tramway system because in rainy season, most of the track is washed away and is re-made. Some of the *nalas* and the rivers require pucca bridge, which are very expensive.

36. *Nil.*

37. From ½ to 1 per cent. of sugar is deteriorated when the cane is supplied by rail.

38. 40 per cent. of cane is purchased through contractors and agents, and 60 per cent. is purchased direct.

39. We have discontinued advancing money to cane cultivators and contractors as it causes lot of difficulty to realise the money. Some of them supply cane to other factories and so advancing does not fulfil the purpose for which it is given.

40. We pay loading expenses and freight and one pice per maund commission to the agents.

41. About 12 per cent. of cane we got from Co-operative Cane Marketing Board, Moradabad on the same terms as with contractors.

42. For weighments of cane weigh-bridges have been laid at the factory gates. For the local cane payment is made on the same day, contractors are paid Rs. 100 per wagon on receiving Railway Rate per wagon and the balance is paid on receipt of their bills from time to time.

43. Cost of cane has been as follows:—

	Per maund. As.	Per maund. P.		Per maund. As.	Per maund. P.
1934	7	3	1936	6	6
1935	7	0	1937	4	6

The prices are fixed by Government for each fortnight and the bear relationship to the price of sugar.

44 to 47. The prices are fixed according to the rules under the Sugar Cane Act, 1934, but we have been paying high prices from 1933 to 1936 as local cane was being delivered to the gur and khandsari. It is only in 1936-37 that we have to pay prices according to Government Rules. First we were paying 1 anna to 1 anna 6 pies above the Government minimum price.

48. *Nil.*

49. In our opinion if a bonus or some other extra allowance is given to those cultivators whose cane is either superior in quality or early or late variety it will bring good results. Both the recovery and duration of season will increase.

50. Gross days each season have been:—

1934	108 days.
1935	165 „
1936	155 „
1937	186 „

53. There are about one thousand men working in our sugar factory out of which about 500 is skilled labour and the rest unskilled in the crushing season. In the silent season there are only about 250 men, out of which about 100 are skilled.

54. About 75 per cent. of the skilled is imported from Eastern parts of United Provinces and other places.

55. We have got only one foreign engineer whom we have not been able to replace so far.

56. We have built free quarters for the labour with free light, water, fuel and medical aid.

	1935. Per cent.	1936. Per cent.	1937. Per cent.
57. Coal burnt	1·02	·33	·03
Wood	4·037	1·22	·4

Last year we had about 8,000 maunds bagasse excess. We are not baling our bagasse but we are selling it locally one anna per head load.

58. Final molasses, Press mud and bagasse. Price of molasses that we were able to procure is as under:—

	As. P.
1934	1 6
1935	1 0
1936	0 6
1937	No market.

60. We book molasses to markets in Calcutta and the freight is 7 annas 4 pies per maund which is abnormally high and which absolutely removes chances for molasses being sold. The railway arrangements are inadequate.

61. In our opinion molasses should be burnt in the boilers and the ash utilised for the recovery of potash and the manufacture of absolute alcohol and power alcohol, should be allowed, otherwise to store molasses every year will become a very difficult problem.

62. No.

63. At the beginning of seasons we have no stocks, at the end of seasons we get some unsold stocks which had to dispose off during off-season.

Stocks at the end of the seasons:—

	Bags.	Mds. Sr. Ch.
1935	9,367	25,337 17 8
1936	42,297	114,730 24 8
1937	21,775	54,437 21 0

65. We have quite a big godown in our factory which can hold about 30,000 bags. We have not increased our godown capacity in recent years and neither we intend to do so in near future.

66. Sugar does not deteriorate much on storage except in the rainy season.

67. Only a small proportion of sugar was damaged and some of it was sold at Rs. 4 to Rs. 8 per maund, while we had to remelt about 60 bags.

68 and 69. Sugar gets damaged on destination when it is exposed at stations due to delays in taking delivery and during the transit when sugar booked in non-water and air-tight wagons during rainy weather.

70. We experience difficulties many a time in getting wagons for transportation.

75. Reserve fund is so far Rs. 1,000.

76. Dividend on ordinary shares is 3 per cent. in 1935, 8 per cent. in 1936, and 9 per cent. in 1937.

77. Working capital is borrowed from banks when sugar does not find a ready market, and is to be stored.

	Interest.
	Per cent.
1934	7 to 9
1935	5½ ,, 6
1936	4½ ,, 5

78. The office is maintained at the premises and its expenses including salaries are Rs. 15,000, Managing Agents' commission is 10 per cent. on the net profit.

79. We recommend 6 per cent. dividend to shareholders after meeting depreciation.

81. So far no reduction has been made in the working expenditure.

82. There is very little room in the further reduction in the working cost and improving the recovery.

83. Punjab, North West Province and Rajputana are the markets.

84. Sugar is sold through commission agents and brokers.

85. Present sale form is a lengthy form. In our opinion the terms must be short from law point of view for the trade like the order securing system which is adopted in well-organised flour mills. Present form is giving undue favour to the buyer who are accustomed to make false excuses in taking delivery of the goods. Dealers should not lodge any claim or make any excuses for not taking delivery of goods unless they retired the Railway Rate from the Banks.

86. Average price got for sugar:—

	Per maund.	
	Rs.	A.
1934	9	8
1935	8	12
1936	8	4
1937	6	12

87. Difference between retail and wholsale price is 2 annas per maund.

88. Dealers store sugar in private godowns. Sugar deterioration depends upon the construction of godowns and claims but generally during the monsoons sugar deteriorates much and price goes down by about 8 annas per maund.

93. Marketing survey would be advantageous as it is essential preliminary to the operation of a central marketing organisation.

94. We are in favour of Central Sales Organisation.

Jailakshmi Sugar Co., Ltd., Dehra Dun.

Letter, dated 16th July, 1937.

I beg to enclose herewith my answers to the General Questionnaire issued by the Sugar Tariff Board a copy of which was sent to me by you. I am only replying to such questions of which I have personal knowledge or have any opinion to express.

I regret that forms 1 and 2 mentioned in the Questionnaire have not been sent to me. On getting these from you, I will send them back duly filled.

REPLIES TO THE QUESTIONNAIRE.

1. The factory started working in 1926 as an open pan factory and in 1932 was changed into a vacuum pan factory. At present its capacity is 350 tons.

2. Statement attached, but we are only able to give you the figures for the last four years.

3. (*a*) About 50 per cent. of the sugarcane is imported from outside the district and about 25 per cent. of the total cane is available at the Gate. Limestone is available locally and Dehra Dun is a good market for sugar which is 12 miles from here.

(*b*) No facilities exist. Railway freight is too high and the roads are very bad and inadequate.

(*c*) Most of the labour has to be imported but local labour is also being trained.

4. The process of manufacture is double carbonatation with double sulphitation. Sulphitation process is cheaper but the carbonatation process gives a higher recovery of sugar and the sugar produced by this process does not deteriorate so rapidly and also keeps its colour better.

5. As explained in (1) this was converted into a vacuum pan factory in 1932 at an additional cost of five lakhs of rupees. Small extensions have been made every year since then and a larger extension in the Boiling House at a cost of about Rs. 60,000 was made in December, 1936.

6. Extension in the capacity of the factory is required to bring down the cost of production of sugar, but in view of the uncertain future of the Industry the matter is pending.

7. (*a*) Overhead charges, availability of capital, duration of season and the avilability of raw material.

(*b*) This is a very variable question depending on local conditions.

8. Very ordinary parts only are available in India but an attempt has been made to make sugar machinery in this factory and the results so far have been satisfactory.

10. Land was taken on lease for the cultivation of sugarcane, the main idea being the propagation of good variety of sugarcane. Since the Co-operative Society was formed it was presumed that they would undertake this work but they do not do so and a small seed farm has been started again.

11. This has varied from 500 to 100 acres. It was only an experimental farm and the figures are not available.

12. (*a*) *Nil.*

(*b*) 500 bighas.

13. Experiments were tried for finding out the proper season for the cultivation of sugarcane and it was found that the sugarcane can be grown practically all the year round and sowing in September gives the best results.

14. (*a*) The quantity of sugarcane in this Estate has increased from 400 bighas to 8,762 bighas.

(*b*) The quality of cane has deteriorated during the last four years on account of no improved varieties being introduced.

15. During some years the sugarcane crop suffers from serious damage from frost and the percentage of sucrose has been known to have dropped by 40 per cent. The disease and insect pests damage has not been calculated.

16. Sufficient sugarcane is not available locally and has to be imported from outside. The principal varieties are EK 28, 290, 213 and M 16. The sucrose contents vary from time to time.

17. The price of sugarcane is not influenced by competition of other factories because the price paid for the sugarcane here has always been very much higher than at other places.

18. (*a*) Yes, it has gone on increasing all the time.

(*b*) Because a ready market has been found for the sugarcane and no other crop gives the same return as sugarcane.

19. In this area the sugarcane has not been enough to supply even the 50 per cent. of the requirements and therefore instead of restriction encouragement for the sugarcane cultivation is required.

20. Attached.

21. Proper methods and improved varieties of sugarcane should be introduced and better arrangement for the carriage of sugarcane, *i.e.*, improvement in the roads and type of bullock carts as well as the reduction of freight on railway line is required.

23. We have always been giving advances to the cultivators for the growing of sugarcane free of interest and whenever required seed and manure, etc., has been supplied by us. Also, all the feeder roads at the Gate have been made and maintained by us.

24. (*a*) Fixation of quota for the sugar manufacture by factories has not become a necessity but very great care will have to be taken in fixing such a quota. The peculiar circumstances of every factory including its cost of manufacture, efficiency of working, capacity and duration of season should be taken into consideration, otherwise many factories will get an undue advantage and others will suffer. In addition markets nearest to the factories should be allotted for the sale of their sugar, to such factories.

(*b*) (i) The licencing of new factories is most essential and the licences should only be given where sugarcane is the main crop grown and where there is no other market for the sugarcane. No factory should be allowed to be erected in the vicinity of an existing factory and the capacity of the factory be fixed so that it may be able to get all its supply of sugarcane in its vicinity. This will avoid over-production of sugarcane and at the same time find market for sugar.

(ii) Licencing of the extension of the existing factories should also be introduced but very great care is necessary in the issuing of such licences. Factors like efficiency of the factory, its natural advantages, raw material, climate, etc., should be taken into consideration. Also, great care has to be taken when certain factories which are already making a good profit and are economical units are not allowed to be extended and similarly the factories which have not been able to extend their plant so far and are running on uneconomical basis owing to their capacity should not be debarred from extensions either to increase their efficiency or to make their factories economical units. Many factories which are at present being run on uneconomical lines on account of the capacity, have refrained from extending their plants on account of the uncertain future of the sugar industry. If care is not taken to afford special facilities to them and to give licences for the extension, they will have no alternative but to close down; and other factories which are already larger economical units will go on extending their plants and thus ruin the smaller factories.

25. (*a*) Gate Cane—25 per cent.

(*b*) Rail cane—75 per cent.

(*c*) Tram-borne cane—*Nil.*

The proportion has been nearly constant.

26. The gate cane is entirely transported by carts and the average weight of cane carried by carts is about 17 maunds. It is not possible to introduce rubber-tyred carts here as the roads are very bad.

27. No, the roads are very inadequate and the condition very bad. The cane at the gate is brought from a maximum distance of 5 miles. It takes from 4 to 18 hours from the time of its cutting to the delivery at the factory. During the winter months there is not much deterioration from the carts but it does deteriorate during the latter part of the season.

29. The average cost of transportation of cane by carts is about 1 pice per maund per mile. Generally the sugarcane is being carted by the cane growers themselves.

30. Toll tax has to be paid on sugarcane passing through Dehra Dun municipal limits.

31. For the sugarcane purchased by us direct from the cultivators, requisition slips are issued to the cultivators daily and only such sugarcane is weighed as is brought in response to such requisition slips. The normal period of detention of carts at the factory premises is about half an hour and the waiting time outside the factory does not exceed 2 hours. As no difficulty has been experienced on this account, therefore no further improvement is required.

32. Generally it is brought from a distance ranging from 6 to 40 miles. In some cases it has been brought from about 70 miles. Average time taken from its cutting till delivery at the factory gate ranges from 24 to 72 hours. By proper changing of the time of railway pilots for this purpose the time can be minimised.

33. Railway rates are calculated on flat rates, and maundage rates will be very inconvenient as wagons will have to be weighed in every instance and it will increase the cost of transportation and at the same time delay in the supply of sugarcane will result.

34. The rates of raw material, limestone, etc., at present are too high.

35. Does not arise.

36 & 37. Have no information.

38. We used to buy all our sugarcane directly upto two years ago and since then we have started purchasing through the Co-operative Society and through agents. Only ⅓rd of the whole supply was purchased directly from the cane grower this year.

39. Contracts are entered into with the cultivators for the supply of sugarcane beforehand and advances are given to them free of interest to grow sugarcane, and whenever so required by them technical advice, seed, etc., has been provided by us.

40. In case sugarcane is not purchased from the cultivators direct, 1½ to 3 pies per maund commission has been paid.

41. Sugarcane has been purchased from Sugarcane Co-operative Societies on commission basis.

42. Sugarcane has been weighed by us at four centres, *i.e.*, Dehra Dun, Badripur, Harrawala and Doiwala. Weigh-bridges have been provided at all these centres and the sugarcane has been weighed in the presence of representatives of the Co-operative Societies. Payment is not made at the time of delivery but whenever demanded by the cultivators or the Co-operative Societies.

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43. The undermentioned are the rates for cane:—

	As. P.
1932-33	5 11
1933-34	6 1
1934-35	6 5
1935-36	6 6
1936-37	5 6 to 6 3

So far as the district sugarcane is concerned the rate is practically constant throughout the season, but in the Saharanpur district from where the major supply of our requirements for the extra sugarcane comes, the rates vary and tend to be higher towards the end of the season.

44. The price of sugarcane does not seem to bear any definite relation to the price of sugar.

45. Previously the price of cane used to vary with the price of gur but with the very great increase in the area under sugarcane cultivation there does not seem to any relation between the price of gur and the sugarcane.

47. Prices we have generally kept 1 anna per maund over and above the minimum Government rate for the sugarcane of the district because sugarcane at that time was not available in plenty on the Lhaksar side and at the same time the sugarcane here was superior to the sugarcane at Lhaksar side.

48. The present method of fixing the price of sugarcane does not seem to be satisfactory. We cannot foresee and cannot fix the prices of sugar as we are not aware what changes are going to take place in the minimum price of sugarcane notified by the Government. The minimum prices of sugarcane have not been fixed on the actual selling price of sugar in the markets, because had these been so, the minimum price would have been much lower than it was during the last season. The ideal way would be to fix the price of cane on the sucrose contents of the cane and the purity of the juice, but many difficulties are likely to arise in this connection because it will not be possible to analyse each and every cart separately. If a flat rate were paid, say, for a day's sugarcane supply then such cultivators who had improved varieties would get the same price as growers with inferior variety of sugarcane. One way of overcoming this would be to keep a separate record of the varieties of sugarcane supplied by individual cultivators during a particular period and the total price to be paid for the sugarcane fixed on the basis of the sucrose content and purity of this cane. Occasional tests would be carried out by which the difference between the sucrose content and the purity of juice of different varieties of sugarcane supplied could be determined and the price paid to the growers could be varied proportionately to this. Thus the purchasers would have paid the price according to the sucrose content and the purity of juice of the whole cane and the individual cultivators would get the price in the proportion of the sucrose content and the purity of juice of the different varieties of sugarcane supplied by them.

If the sugarcane price were fixed according to the cost of production of sugarcane, then it would be very unfair to the factories because some of them would get sugarcane at very low rates whereas others would get it at higher rates. This also could be controlled to a certain extent by introducing proper varieties and methods of cultivation. If this question of the cost of production of the sugarcane had to be taken into consideration in fixing the price of sugarcane then in such localities where the cost of cultivation is higher the factories should be given special concessions, for example, a special reduction in the Excise Duty on the basis of the increased price of cane.

49. This has been answered in the above question.

50.

During season.	Days.
1933-34	135
1934-35	147
1935-36	166
1936-37	220

51. The crushing season could be extended by introduction of early and late varieties but this might lead to over-production in sugar.

53. (*a*) *Crushing Season*—

	Skilled.		Unskilled.	
	Hands.	Amount.	Hands.	Amount.
		Rs.		Rs.
Engineering including casual labour	133	3,071	79	1,187
Manufacturing department	63	2,330	138	1,519
Cane feeding and shunting	...	...	135	1,500
Total	196	5,401	352	4,206
Silent Season.				
		Rs.		Rs.
Engineering including casual	63	2,218	16	183
Manufacturing	1	100	6	66
Total	64	2,318	22	249

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54. Almost all the skilled labour is imported from other districts.

55. Almost all the skilled labour employed is Indian.

56. Suitable quarters have been built for the labour and adequate and good water supply arrangements have been made. A first class hospital has been built and maintained by the Company for the workmen.

57. The bagasse has to be supplemented by fuelwood. The figures are as below: —

	Maunds.
1934-35	93,400
1935-36	133,600
1936-37	115,200

58. None.

59. The production of our molasses has generally been let out on contracts in every season in recent years. Owing to lack of adequate consumption of this product the practice of contracting for the production of a particular season has been more beneficial to us than selling in retail. The only cause

that appears to us which may affect the price of molasses is poor demand. Following particulars for production and price of this product are given:—

Season.	Price.	Quantity.
	Mds.	Rs.
1933-34	740	21,000
1934-35	1,500	45,000
1935-36	2,500	64,000
1936-37	9,200	86,500

but this year there does not seem to be any prospect of our being able to sell molasses anywhere near the previous figures.

60. A part of the molasses is consumed in this district. It is only transported in carts and lorries. Since there is no transportation by rail the question of railway facilities does not arise.

61. The only feasible proposition seems to be the manufacture of power alcohol from molasses, but this can only prove successful if necessary legislation is introduced making the mixing of alcohol with petrol obligatory.

62. Does not arise.

64. Stock of sugar—

Season.	Beginning of season.	End of season.
	Maunds.	Maunds.
1933-34	...	11,500
1934-35	...	22,000
1935-36	...	35,000
1936-37	5,200	82,000

inclusive of outside centres.

65. We have our own godown for storage of sugar. Formerly, our godown had the capacity of 12,000 bags, *i.e.*, 30,000 maunds, but recently in this season our extension in the godown was made by us for accommodating a further quantity of 8,000 bags, *i.e.*, 20,000 maunds. Considering the outturn of the season and the market conditions we are left to think whether at all the present space we have in the godowns will be adequate, if the same conditions continue to prevail in the next season also.

66. Generally, we manufacture 1st and 2nd grade sugar in larger quantities, and the deterioration has not been noticeable to a great extent. The deterioration, if any, occurs in the rainy season and this affects the 3rd grade sugar and crushed sugar to a considerable extent. We may, however, add that the deterioration does not affect the quality so much as to make it practically unsaleable. We have been generally able to dispose of this sugar at a slightly reduced rate.

67. It depends on the quality of sugar. Sometimes it is sold outright and sometimes it is reconditioned.

68. Do not know.

69. From reports received from our dealers we find that sugar gets damaged in transit mostly during summer and the rainy season, and in the last season damage is comparatively greater. This is chiefly due to bad supply of wagons. The railway to our knowledge has not got adequate stock of watertight wagons with the result that water finds its way into them through crevices, windows or doors and spoils all sugar, forming it into lumps and decolourising it considerably. Further due to heat in summer sometimes sugar starts melting in the wagons and deterioration sets in. It is probably due to bad construction of wagons. The Railway should construct wagons in a manner so that they are conditioned to withstand the effects of heat during summer and moisture during rains. The damage that the sugar suffers during these two seasons is estimated by us to be roughly 5 per cent.

70. Yes, great difficulty has been experienced in the supply of requisite number of wagons from Railway for sugar loading and especially water-tight wagons, with the result that the factory had to pay compensation of large amounts to the dealers for delayed despatches. There has been, however, not very serious complaints with regard to delay in the delivery of sugar but on the other hand great loss has been suffered by us due to the station staff allowing the sugar consignments to be tampered with before they are taken delivery of at the other end. This is a matter which should receive the attention of the Enquiry and as also of the Railway because this practice on the part of the staff of allowing latitude to dealers is very detrimental to the interests of the factories. If supposing the dealer is unwilling to take delivery of a consignment booked to him under his own instructions for some reason, financial or malicious or otherwise, he has ample scope to do so by obtaining samples from the undelivered bags and send the same to us stigmatising them as not up to sample. On this false pretext he arranges to refuse delivery. The factory owners in that case have no other alternative but to grant compensation to them as demanded by them in order to save the whole sugar from going under heavy demurrage, or lying at the stations unclaimed or instead of being forced to effect a public auction which naturally does not bring even half the amounts on which the sugar was originally billed. It is trusted that the Tariff Board Enquiry will ask the Railway to make some arrangements for avoiding this practice on the part of the station staff as it involves great loss.

71. We are unable to give any suggestion at present with regard to change in the construction of wagons but, however, technical men in this line should be able to devise means by which the wagons are so conditioned that they could withstand effects of heat as well as moisture during rains.

72. The following have been the approximate prices at which our products have been sold. No sale has been effected by us at ports:—

	Peshawar, Lahore, Amritsar and Upper Punjab.			Dehra Dun, Saharanpur and Hardwar, etc.		
	Per maund.					
	Rs.	A.	P.	Rs.	A.	P.
1933-34	9	0	0	9	5	0
1934-35	8	15	0	9	3	0
1935-36	8	14	0	9	2	6
1936-37	6	14	0	7	1	6

Freight to—

	Per maund.		
	Rs.	A.	P.
Peshawar	1	4	6
Lahore	0	12	5
Dehra Dun	0	1	0
Sialkot	0	14	2
Rawalpindi	1	2	8

74. It has not been possible to make any depreciation during the last four years.

76. 20 per cent. in 1932-33.

Nothing in 1933-34.

Nothing in 1934-35.

3½ per cent. in 1935-36.

77. By borrowing from Banks at 5 per cent. There are no head office expenses and a managing agency does not exist.

79. 10 per cent. is a fair return on the capital in view of the attached risks of loss during particular years and also to allow for accident and other damages.

80. We will send this information on receipt of the forms.

81. By the extension of our plant made in the year 1933 we were successful in doubling the production of our sugar. Thus during the succeeding years we were in a position to crush daily more than what we could before that period. But while our mills were quite efficient and could crush continuously to their fullest capacity we had often to confront with the insufficiency of our boiling houses which were incommodious and could not take in all the juice that the mills could give. To obviate this difficulty the Quadruple Effect was erected during this season and this has been to a considerable extent responsible for maintaining a continued crushing of about 10,000 maunds on the average while we could do only 8 to 9 thousands before. By this increase in crushing we have been able to reduce the fixed manufacturing cost of items like salary, stores, etc., per maund. Reduction in the overhead charges has not been possible for us in any year as a result of the extensions and additions in our plants.

82. The working cost can be very much further reduced by the improvement in the rates of recovery of sugar by having better quality of sugarcane.

83. Our sugar marketing centres are Peshawar, Nowshera and other North-West Frontier towns, Punjab and Dehra Dun.

84. (*a*) We employ Sole Agents for the sale of production of our factory on commission basis. We fix the rates of sugar and they sell sugar on these rates.

(*b*) Have no information.

85. Yes, the present contract form is suitable in our opinion.

86. Our wholesale rates have been given in answer to Question No. 72. Other information is not available.

87 & 88. We have no information.

89. We do not consider that our sugar deteriorates more rapidly than Java sugar, and our sugar has been of a very high grade since 1933.

91. Our sugar is in no way inferior to the Java sugar.

93. Yes, we think that the market survey of the sugar industry would be very beneficial.

94. Yes, we very strongly favour a Central All-India Selling Organization. A Sugar Syndicate has now been formed in Calcutta and we consider that full benefit could only be obtained if legislation is introduced to make it obligatory for every sugar manufacturing concern to be a member of this Syndicate, otherwise the sugar factories remaining outside the Syndicate are likely to gain the greatest advantage to the detriment of the members of the Syndicate and this will lead to the failure of the scheme.

95. Standardization of Indian sugar will be very beneficial as it will facilitate the selling contracts and the sales. Standards should be based on the Indian Sugar standards.

96. (*a*) *Nil.*

(*b*) Yes.

97. If the standards were available at very much reduced rates and all the contracts were made on the basis of these, then the usefulness will become real.

105. This proved very harmful especially to the small sugar factories though it did, to a certain extent, check the indiscriminate putting up of new factories.

The addition of the Excise Duty in 1937 has taken away all the profits from the Industry; and unless this is removed it will be impossible for the small factories to exist. It has especially affected such factories as had made forward sales without expecting any increase in the Excise Duty. Even higher rate of Income-tax would have been better than the enhancement of the Excise Duty because the Excise Duty has to be paid irrespective of any profits.

106. Already replied.

Enclosure.

Statement showing production of sugar for the following seasons with mention as to qualities:—

Season.	K.	L.	AA.	X.	S. and Rori.	II lot.	III lot.	I.	Brown.	Bags.	Mds.
1933-34 .	12,102	3,316	5,932	3,016	914	..	..	..	..	25,280	62,700
1934-35 .	21,039	4,518	5,244	3,585	1,281	..	..	..	..	35,662	89,156
1935-36 .	20,282	20,181	6,329	5,949	128	..	..	..	..	52,869	132,172
1936-37 .	8,520	17,595	11,239	4,542	372	26,862	4,385	2,749	10,217	86,481	216,202

The Ganga Sugar Corporation, Ltd., Shaharanpur.

1. The factory was erected during the year 1933-34 and started manufacturing operations from the first week of February. The rated capacity of the Plant was 400 tons. By additions and extensions it can crush upto 700 tons a day.

1933-34.

Quality.	No. of bags.		Mds.	Srs.
I	7,500		18,750	0
I-A	4,330		10,825	0
II	376		940	0
III	73		182	20
Crushed	52		130	0
Rori	151		302	0
	12,482		31,129	20

1934-35.

Quality.	No. of bags.		Mds.	Srs.
I	26,966		67,490	0
II	3,065		7,662	20
I-A	13,566		33,890	0
Crushed	1,139		2,847	20
Rori	437		874	0
	45,193		112,764	0

1935-36.

Quality.	No. of bags.		Mds.	Srs.
I	46,773		116,932	20
	84	(2—28)	236	32
I-A	20,546	(2—20)	51,365	0
II	6,070		15,190	0
III	132		330	0
Crushed	1,581	(2—19)	2,445	0
Crushed	978	(2—20)	3,912	19
Rori	1,005	(2—0)	2,010	0
	77,175		192,421	31

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1936-37.

Quantity.	No. of bags.	Mds. Srs.
I	63,210	159,025 0
I Fine	15,771	39,427 20
I-A	24,349	60,872 20
II	285	712 20
Rori	35	70 0
	103,650	259,107 20

3. (*a*) When our factory was erected it was not at all in an advantageous position so far as the supply of cane and raw material such as limestone was concerned. This was not a developed area from the point of view of cane, when we started the factory in the first season in the month of February, we felt scarcity of cane and inspite of our best efforts could not continue work beyond 15th/16th March. As regards limestone we import it from Dandote (Punjab) and have got to pay 3 annas 8 pies per maund as railway freight, besides loading expenses and the price of the stone. There was only a slight advantage of the market of the Punjab which has also disappeared on account of the reduction of railway freight by the East Indian Railway for the Mills on Bengal & North-Western Railway which can easily compete against us and sell their goods in the Punjab market as they get cheaper cane and their cost of production is less.

(*b*) The railway does not give sufficient facilities to which the Industry is entitled. North-Western Railway where our factory is situated has got limited Rolling stock and every time during the season there is a shortage of wagons for the cane and also for empties for loading sugar practically, throughout the year. Railway authorities are un-accommodating. They turn out even very reasonable requests. Their rules about the demurrage of cane wagons, etc., are penal. There is a heavy detention of sugarcane traffic and we receive cane wagons sometimes after detentions of 4 to 6 days. We always bring our complaints to the notice of the Railway authorities but without any substantial results. So far as other road connections are concerned, our factory is in a very bad situation. Practically there are no roads here. We have not got a single metalled road which should connect our factory to any other main roads. There are only *kucha* roads and they are in such a hopeless condition that if it rains even for a single day the factory has got to close for want of cane as carts of cane cannot travel on these roads. District Board is doing nothing in this direction as it is not free from its own party dissensions.

(*c*) We cannot get sufficient trained local labour, and in spite of the fact that the factory has been working for the last four/five years, people are not coming forward in large number to learn the process of manufacture of sugar with the result that we have to import practically all such labour from Bihar.

4. The process of manufacture of our factory is carbonisation one. In the sulphitation process the plant is less expensive and the process is cheaper to work. On the other hand, the carbonisation process is more positive in its action, yields a higher recovery and the sugar produced is of better quality. The principal items which raise the cost of carbonation factory are limestone which is to be used to a quantity of about 4 per cent. of the weight of the cane and coke. Secondly, more labour is required in a carbonation factory, than in a sulphitation one.

5. On the original plant we have added a few presses, one sugar dryer, one boiler, on pan, one c.c.[3] pump, Independent Cane Carrier Engine, Cane Cutter, steel slates and a new chain for the cane carrier. We have spent about Rs. 1,70,000 on these extensions.

6. We have no intention to extend the plant any more, but we will try to improve it in efficiency by adding a cane leveller at the cane carrier,

automatic Bagasse feeder, and Bagasse Baller, removal of sugar Dryer and drying the sugar in the Centrifugals or cooling it in a hopper in order to improve the colour and crystal of the sugar.

7. (*a*) The main factors which determine the size of an economic Plant in a Sugar Industry are (i) abundant supply of cane and (ii) disposal of sugar, *i.e.*, nearness of market. If we have got large supply of cane continuously during the season, the bigger the capacity of the Plant, the more economical it will be to work it. But in order to attain high profits and good results we should have a hand a very good market for disposal of sugar. The larger the capacity of the Plant, the less will be the proportionate charges of skilled labour and depreciation.

(*b*) 600 tons is the smallest Unit of production which may be operated economically under present day conditions.

8. Simple parts such as Cast Iron pipes and plates, etc., comparatively easy to manufacture are obtainable in India. Generally speaking, sugar machinery is a specialised manufacture and has to be imported.

9. We are not satisfied with the technical assistance given by the Imperial Institute Department of our Local Government. Both these departments can do a lot and improve the condition of the Sugar Industry in India. The Imperial Institute of Sugar Technology is carrying on more or less an official work and is more helpful to the Government than to the Industry at large. The Imperial Institute of Sugar Technology can undertake the publication of a monthly Journal relating to sugar problems which should deal with the problems of the Industry as a whole and not of particular factories only, the work which it is doing in these days.

Raw Materials.

10. We are not undertaking cultivation of sugarcane. We have tried to undertake it, but the land is not available for the purpose. There are various difficulties in securing land either on lease or by sale out-right. In the first instance it is difficult to secure one big plot at one place which alone can be useful for the cultivation of cane by the factory. Secondly, the people when they come to know that the factory wants land, they unreasonably increase their prices, although they will sell at a very cheap rate privately but when they have got to sell it to the factory, they will demand unreasonable price. The Government is not going to acquire land for the factory for the purpose of cultivation.

11. Does not arise as we have got no farm of ours.

12. We have got only about 40 bighas of land, where we cultivate cane for the purpose of experiment. Only in the last off-season we cultivated 312 and 313, and distributed it as seed among the cultivators.

13. So far we have not made any experiment about the early and late variety of cane. We have got Cane Development Society which started its work only last year, but actually it will start supplying cane only from the next season when we will be in a position to say how far it will be helpful in the improvement of the different varieties of cane round about our factory.

14. (*a*) & (*b*). It is very difficult to enumerate the extent of the changes that are taking place in the quantity and quality of cane, but from the very outset we can say that practically all *desi* cane has been replaced by 213 which is also now deteriorating and 312 and 313 are taking its place. As regards the quantity of cane available, we can say that uptil now we have not got sufficient cane to meet our full requirement of the season. It will take another two years when we may be able to get our full requirement from the gate.

15. It is very difficult to give the extent of loss from frost or insect pest. But our experience of 1934-35 shows that the frost alone damaged about more than 80 per cent. of the cane, wherever the same was affected by it.

As regards the loss by insect pest, if we do not get rains in time and the cane be in a weak condition, the loss from insect pest may be about 80 per cent. of the crop.

16. Our factory is not at all assured of a sufficient supply of suitable cane. It will take us another three/four years to reach that stage.

The principal varieties of cane in our area are 244 and 213. In the last season we have popularised to some extent 312 and 313, and this year 331 is also coming into existence.

The field yield and sucrose contents of these varieties largely depend upon the weather conditions. If we got good monsoons and at intervals the tonnage is higher and so are the sucrose contents, otherwise it becomes poor. The average tonnage of a weak crop will be about 300 maunds per acre and in case of normal crop it will be about 400 maunds per acre. The sucrose contents vary from 8 to 9.

17. The competition of cane only comes in when there is a shortage of supply to meet the requirements of the factories which are existing close to each other—say upto 15 miles from each other. The extent of competition and the rise in price is sometimes so much that the Mills have no margin of profit for themselves.

18. (*a*) There has been a considerable variation of area under the cane cultivation. When the factory came into existence there was a good demand of sugarcane at very good price because there was no excise duty at the time. This gave an impetus to the cultivators who found greater profits in the cultivation of cane than any other crop, therefore, the area under cultivation started increasing.

(*b*) (i) The climatic conditions are also favourable for the cultivation of cane, because there are sufficient number of canals operating in this area and the rainfall due to monsoons is quite sufficient for the cultivation of cane.

(ii) In the previous years the prices obtainable for sugar were not very bad, hence the factories were paying quite a high price for cane as there was competition amongst factories and everybody tried to get full supply of cane according to its requirements and the cultivators used to get very good return for the cane. (iii) & (iv) The alternative cash crop here is wheat. But the yield of cane and its price justify higher return, therefore, the cultivators, have turned their attention towards cultivation of greater area under cane.

19. The production of sugarcane in our area is not in excess of our requirements. We have to import about 1,200,000 maunds from outside. No restriction is necessary in our area because it will take another three/four years for us to get cane from our area according to our requirements and that too in the seasons when the crop is normal, otherwise, we shall have to import a good deal from outside.

20. The average cost of cultivation of sugarcane of an average cultivator does not exceed 1 anna 6 pies per maund. We take a tentative proposition. If an average cultivator has to cultivate one acre of sugarcane he will have to employ two bullocks and one labourer for a day for which he will have to pay Rs. 2 for the bullocks and 4 annas for the labourer, *i.e.*, Rs. 2-4 for ploughing one acre of land. For one acre 40 maunds of seed will be quite sufficient, and the cost of 40 maunds at 4 annas a maund will be Rs. 10. He will have to water the field twice before the rains and after every watering he will have to dig the field which will cost him Re. 1 per acre, *i.e.*, Rs. 2 for digging twice. The irrigation dues will be about Rs. 8 per acre, and land revenue will be about Rs. 5 per acre, and 8 annas or 12 annas for weeding, etc. Thus the total cost of cultivation including the price of the seed will come to Rs. 28 and if the rains are in time the average yield per acre will be about 300 maunds of cane without using any manure, etc., and if we use any chemicals for manure the yield will be 400 to 600 tons per acre, but we take an average of 300 maunds which will give the actual cost of cultivation of 2 annas 6 pies per maund.

21. The main difficulties of cane growers in the cultivation of cane are that they have not got proper information and knowledge of the various varities of cane and methods of cultivation. They are following their old methods which they see and observe round about their neighbourhood. It is the duty of the Agricultural Department to afford guidance and regular information in the cultivation and makes of cane.

As regards delivery of the cane in the factories the main difficulties of the cultivators are that in various parts of United Provinces there are not good roads to the factories on account of which strain on the bullocks is too much and the cartage is very heavy. If there be good roads to the factories the cost of carriage from the field to the factory will not be more than 3 pies per maund, but in the present condition, the cost ranges about 6 pies to 9 pies per maund. Therefore, if the Government wants to help the factories and the cane cultivators they should build a number of good metalled roads which should connect cane-areas to the factories by grant of free lands and loans on easy terms of interest and payment for running tramways into the interior for the import of cane to the factories. This will help the Industry as well as the cultivator.

22. (a) We do not agree with the conclusion of the Tariff Board that the compulsory acquisition or leasing of land for cultivation of cane by factories was impracticable. On the other hand, our definite opinion is that if the Government intends to make this Industry self-sufficient and intends to protect it on the same standard as it is in other countries, it will have to help the factories in acquiring lands compulsorily for the cultivation of cane, because the Industry in India, has considerably developed so far as the manufacturing process is concerned. We have obtained practically 95 per cent. of the efficiency which the other factories in Java and Mauritius have obtained after working for hundreds of years.

But we are very backward so far as the cultivation of cane is concerned. and the only possible way to improve it is to help the factories to have their own farms where they will cultivate cane according to modern scientific methods and will grow only that cane which gives the maximum tonnage and highest sucrose contents. An ordinary cultivator will not be able to attain this end on account of his poverty and a lack of knowledge and information about the cultivation of various varieties of cane and the modern scientific methods of cultivation.

(b) The allotment of special areas to different factories will undoubtedly improve the present system, but cannot be considered an ultimate solution of the problem.

23. We are prepared to help upto the required extent the cultivators in the form of advance of cash or supply of seed and manure provided the Government guarantee that our money will be returned to us during the season with interest of 8 per cent. per annum. So we may advance in this way about Rs. 40,000/50,000 every year.

24. (a) We are in favour of fixation of a quota for the manufacture of sugar by the factories under the present conditions, because we believe that there is an overproduction on account of which there is internal competition in the sale of sugar which has considerably lowered its price and the factories get less return than they would have otherwise got, and if these conditions continue the factories will run at a loss and many factories will have to close. Therefore, in order to avoid that we should fix minimum profits for every factory on the basis of which we should fix a quota for the manufacture of sugar.

The question of fixation of quota will not arise in case the Industry is helped by the Government in finding out some export markets, otherwise, fixation of quota in the manufacture of sugar is essential.

(b) Unless there are avenues of export it is not only essential that there should be licenses for the construction of new factories, rather the construction of new factories should be stopped by legislation, otherwise there is a great danger to the factories under the present conditions. Similar is our opinion about the extension of existing factories, *i.e.*, the factories should not be allowed to extend any more.

25. 1933-34—
(*a*) 10 per cent.
(*b*) 90 ,,
1934-35—
(*a*) 17 ,,
(*b*) 77 ,,
(*c*) 6 ,,
1935-36—
(*a*) 26 per cent.
(*b*) 67 ,,
(*c*) 6½ ,,
1936-37—
(*a*) 58 ,,
(*b*) 38½ ,,
(*c*) 3 ,,

26. Our cane at gate is generally transported by carts and also by lorries. The average weight of cane cart has been 16 maunds. By substitution of rubber tyred carts, we can improve the type of country carts to a considerable extent. If we get metalled roads and rubber tyred carts, each cart will be able to carry at least an average of 40 maunds of cane.

27. There is no question of the mileage of roads in our vicinity. The condition of main as well as feeder roads is hopeless, so to say there are no roads to our factory.

28. Generally cane is brought from a distance of six miles to the factory and the average time taken is three/four hours. There is no arrangement for the protection of cane from deterioration during road transport.

29. The average cost of transport of cane by cart per maund per mile is 2 pies. Generally, the cane-growers employ their own carts, but big Zamindars have got to hire them.

30. We accept cane from several villagos by turn and have fixed times with the various villages for the weighment of their cane. The normal period of detention of a cart at our factory is three to four hours. By increasing the number of weigh-bridges and employing cane supervisors at the gate we have been able to control the supplies easily.

31. No tolls or other dues are charged from the carts supplying cane to our factory.

32. We import cane even from a distance of 90 to 100 miles by rail to our factory. The average time taken is three days, and sometimes upto 5/6 days as the arrangement of the Railway for transport of cane is highly unsatisfactory as referred to above.

33. We do not know the basis on which railway freights have been calculated. There have been changes in recent years but not very appreciable. The railway freight on cane charged by the North Western Railway is considerably higher than charged by East Indian Railway and Bengal and North Western Railway. Several representations were made for consideration to North Western Railway but with no result.

We prefer average rate per wagon to maundage rate per mile.

34. The railway has been extremely unreasonable in charging same freight for limestone as they charge for lime. We represented the matter to the Agent, North Western Railway that the basis of fixing railway freight for finished products as well as raw material should not be the same, *i.e.*, we asked them to charge less freight for limestone than they charge for manufactured lime, but they did not agree. The reason for our claim was obvious that raw material should always be given concessional rate over the manufactured goods.

35. No tramways serve our factory.

36. The tramway system is generally advantageous both for the factory as well as for the cultivators. There are special difficulties in laying out a tramway system because each and every factory has not got sufficient funds for the purpose and unless the Government comes forward to help, it is not an easy problem for the factories to tackle single-handed.

37. Cane deteriorates more in transport by rail than by road, because detention of the wagons is very high, while on road cane is imported by lorries or carts and reaches its destination within two/three hours.

38. Out of the cane which we receive at gate we purchase about 90 per cent. from the cane growers and only 10 per cent. comes through the Agents. From next year we will purchase about 50/60 per cent. from the Cane Development Society and the balance direct from the cultivators.

39. We do not think it advisable to advance cash to the cultivators because it is very seldom that they repay such loans. The cultivators do not offer any security for cash loans. However, we have been distributing seed of developed variety of cane on credit.

We do not make any contract for the supply of cane with individual cultivators.

40. To contractors at the gate we pay 3 pies per maund as commission on the cane supplied by them.

41. No.

42. We have got about six cart weigh-bridges for weighment of cane at the gate. The payment is made when the empty carts are weighed and the cultivator presents his cane *parchi* for payment of price. Practically all cane is paid within 24 hours provided the cultivator is anxious to receive payment and presents his *parchi* for the purpose.

43. Our average price for the purchase of cane was as follows:—

(1) 1933-34—
7 annas 6 pies per maund.

(2) 1934-35—
7 annas 1·25 pies per maund.

(3) 1935-36—
6 annas 10·7 pies per maund.

(4) 1936-37—
Approx. 4 annas 11 pies per maund.

44. The Government has evolved a formula for the fixation of the price of cane on the basis of the price of sugar, which is not very wholesome principle, because if the price of the sugar falls the price of the cane naturally falls, and when the price of cane falls the price of the sugar falls.

The price of the cane ought to have been fixed according to the cost of cultivation and sucrose contents in a particular variety of cane.

45. To a considerable extent the price of cane is influenced by the price of the *gur*. In our area an average cultivator is very cautious and alive to his interests. He is always calculating the extent of difference in price which he may get for his cane by making *gur* or by selling it to the factories. If the price of the *gur* is high, greater number of small crushers will come into operation and thus the quantity of cane coming to the factories will be reduced which will compell the factory owners to increase the price of the sugarcane so that people should bring it to the factory instead of converting it into *gur*.

46. There have been considerable variations in the price of the *gur* in our area, because the purchase of *gur* now has been considerably stopped on account of the closing of various gur Refineries which is due to the imposition of excise duty.

47. In spite of the fixation of minimum price for *gur* by the Government we have been paying excess price for our cane even uptil now. In

the first two/three years we have been paying sometimes 1 anna above the Government minimum price but in the last year, we have been paying 6 pies above the Government minimum, and our average for the last year may work out to 9 pies per maund above the Government minimum price. We have been paying higher price than the Government minimum because our area wherefrom we were drawing our cane was not developed in the beginning and there was shortage of cane supply and we wanted to encourage the cultivation of cane to ensure regular supply in the coming years to the factory.

48. The basis on which the minimum price is fixed is not satisfactory as we have already stated. In our opinion the basis should be the cost of cultivation together with the extent of yield of sugar from every variety of cane.

49. The system of distributing bonus to the cultivators does not seem to be practicable.

50. The duration of the crushing seasons has been as under:—

	Days.
1933-34	66
1934-35	134
1935-36	155
1936-37	171

If we get enough cane from 1st December to 30th April it will be a sufficiently long season for economical working.

51. We are not in favour of extending the crushing under the present conditions unless the Industry gets some facilities for the export of sugar or internal consumption considerably increases, because we are already at the verge of our production and if we make further attempts to extend the crushing season by early and late varieties of cane, the results would be harmful to the Industry, unless the present conditions are changed.

52. We are not satisfied with the assistance given by the Imperial Council of Agricultural Research and the Co-operative Department of the Government, because these are only worked on official lines but the Industry is worked on business principles and therefore, unless these people realise that, they cannot be of great assistance to the Industry. As the persons in charge of these institutions are responsible only to the Government officials, and they try to please them. If the Heads of these Institutions show some responsibility to the factories it is then and then alone that these Institutions can be useful. A clear example of this is that in 1934-35 cane was damaged by the frost and insect pest. The matter was brought to the notice of the Commissioner for consideration, and the opinion of the Head of the Agricultural Department was also invited who was present in the meeting of the factories with the Commissioner, but his attitude was so much different that he did not recognise the extent of damage to the crop. The result was that the problem which was facing the Industry and the cultivators could not be properly tackled. Without the co-operation of such officials the results was that both the cultivators and the factory owners suffered considerably. (These remarks are confidential.)

53. We employ 350 skilled and 300 unskilled hands in the crushing season, and 90 skilled and 50 unskilled hands in the slack season.

54. We import practically the whole of skilled labour from Bihar.

55. We have got only one Chief Chemist who is a foreigner. All others belong to India.

56. We have got quarters for the labour and have got water pump spread all over the factory for the convenience of everybody living in the factory.

Power.

57. We have not been able to meet the whole of our fuel requirement from bagasse. Our expenses of fuel in the past seasons are as below:—

	Rs.	A.	P.
1933-34	28,412	10	6
1934-35	38,326	6	0
1935-36	15,586	14	3
1936-37	18,826	15	6

By-Products.

58. We have got molasses as by-product.

59. Our outturn of molasses in the past seasons has been as below—

		Price.		
	Maunds.	Rs.	A.	P.
1933-34	4,837	151	3	0
1934-35	34,329	7,424	6	6
1935-36	68,707	12,561	9	9
1936-37	75,000	8,000	0	0 approx.

60. We generally sell our molasses in the Punjab. Some of it is consumed by the Amritsar Distillery, Amritsar, and the balance by private shopkeepers who sell it after mixing in tobacco. We send our molasses by rail in tank wagons. The arrangement of the Railway in supplying tank wagons is highly unsatisfactory. Uptil now we have not been supplied tanks according to our requirements.

There are 9 factories working on the line and the Railway has not got sufficient number of tanks to meet with the requirement of each factory, and the result is that every factory remains starved for molasses tanks. As we cannot get sufficient number of tanks to export our molasses in rainy season sometimes we have got to flow it out with the water. If the Railway could provide sufficient number of tanks we would have realised some money from it.

Railway freight for molasses from our factory to Amritsar is 2 annas 9 pies per maund.

61. If there will be no restriction by the Government we can utilise molasses in the manufacture of spirits and commercial alcohols.

62. Surplus bagasse can be sold to Cardboard factories or it can be sold to cultivators in the country and they can only be done if the Agricultural Department informs the cultivators that the same can be used for feeding the cattle after mixing molasses with it.

63. No.

64. In the beginning of the season 1933-34 we had no sugar and in the end we had 9,262 bags. In the beginning of the season 1934-35 we had

no sugar, and in the end we had 24,359 bags. In the beginning of the season 1935-36 we had 91 bags, and in the end 38,258 bags, and in the end we had 49,968 bags.

65. We have got godowns for storage of our sugar, and the present capacity of our godown is 30,000 bags.

We have increased the size of our godown very recently and contemplated increasing it further this year.

66. The deterioration of sugar during the off-season depends to a certain extent on the quality of sugar and also on the godowns. All sugar except "1st standard" becomes moistured during the rains and deteriorates in price to the extent of Re. 1 per maund and sometimes more. As regards "1st standard" only those bags which are at the bottom deteriorate in quality as the side that touches the ground or the material on which they are placed becomes wet and thus those bags deteriorate to the extent of Re. 1 per maund.

67. We generally sell damaged sugar outright at a discount of Re. 1 per maund and even more.

68. There is still a scope for improving the quality of the sugar. We can make as good sugar as Java or any other foreign country can make.

69. Sometimes the sugar is damaged in transit which is due to either leaking carriages supplied by the Railway or when it is stocked in the Railway godowns for transhipment which are open on sides and the sugar which is exposed to atmosphere becomes moist during the rainy season.

70. There has been generally shortage of wagons for the transportation of sugar and this year the shortage has been acute and have been experiencing this difficulty of shortage from the beginning of this season till now on account of which we have suffered a loss of thousands of rupees. By the end of February we had about 15,000/16,000 bags in stock which were all sold but the same could not be dispatched as the Railway failed to supply the necessary number of wagons in January and February. The Government imposed an excise duty of 8 annas 1 pie per maund on sugar that was lying in the godowns. Thus on account of the inability of the Railway to supply wagons we have been put to a loss of thousands of rupees. Now we have got to dispose of in this month about 10,000 bags which is all sold but the Railway is unable to supply wagons according to our requirements. Rainy seasons is fast approaching and we fear some of our sugar may be damaged and thus we may be put to a further loss for want of empty wagons.

71. The wagons which the Railway puts as "watertight wagons" are not in fact so. They should be improved, and the rules of loading should also be changed. Rules relating to loading are very rigid, *i.e.*, if we have got two consignments for different stations we cannot put these in one wagon if on consignment weighs 120 maunds.

72. The average price for our sugar in the past year has been as below:—

	Per maund.	
	Rs.	A.
1933-34	9	12
1934-35	9	8
1935-36	8	8
1936-37	6	15

Railway freights from our factory to various important markets of the Punjab and North-West Frontier Province are as below:—

	Per maund.		
	Rs.	A.	P.
Ambala City	0	3	4
Ludhiana	0	5	8
Jullundur City	0	6	11
Amritsar	0	8	7
Lahore	0	9	9
Gujranwala	0	11	3
Lyallpur	0	12	11
Quetta	1	3	5
Kasur	0	9	0
Taran Taran	0	9	2
Jammu Tawi	0	12	5
Rawalpindi	1	0	0
Thall	1	6	0
Bannu	1	7	2
Peshawar	1	3	8
Havalian	1	1	11
Campbellpur	1	1	9

73. Balance sheets are enclosed herewith as desired.

74. The amount of depreciation is given in the balance sheet. Rate for depreciation is the same as allowed by the Income-Tax Department.

75. No Reserve Funds till now.

76. This is given in the balance sheet.

77. The working capital is provided either by bank or by individual borrowing, and the average rate of interest varies from 7 to 9 per cent.

78. The annual amount of our Head Office expenses is given in the balance sheet. It is generally Rs. 40,000 to 50,000 a year. It does not include Managing Agents' commission, and in fact there is no such commission paid in this concern. The Directors are entitled to ½ per cent. of Commission on the net profits.

79. We consider 12 per cent. to be a fair return on the capital, because at the time the factory was started people who invested money in it had to borrow and they paid very high interest for that, and the rate of interest was not so low as it is now and these individuals cannot draw money at a low rate of interest which the banks are paying in these days.

Efficiency of Production.

81. We have been able to reduce our expenses by increased crushing, *i.e.*, overhead charges have been reduced to that extent and by increased crushing our consumption of fuel has become less.

82. The working expenses can further be reduced by about 20 per cent. by greater efficiency and also by improvement in recovery figures.

Marketing.

83. The principal sugar marketing centres are Jullundur, Amritsar, Rawalpindi, Thall (North-West Frontier Province).

84. Generally the manufacturers have their agents in principal markets who have got sub-agents in the mufassils. The Agents get option and rates

from the Mills which they pass on to their sub-agents and thus the sugar is sold. In every big and small town there are wholesale purchasers of sugar who keep stocks which they pass on to retailers from time to time.

Since the last two years the position has a bit changed on account of the unstability of the sugar market. The stockists of the markets are now no longer financing the sugar trade as they have suffered heavy losses on account of the daily change in rates of sugar. They only purchase to the extent of their daily requirements now. Therefore, we do not find heavy stocks in the markets, but the Mills remain stocked with sugar.

85. The present sugar contract form is too lengthy and cumbersome. The contract form should be precise and definite. It should deal only with the points of rate, delivery and any other important matter. But the form which has been recommended by the Association and adopted by the Mills is too lengthy and it is seldom that the buyers and sellers care to read the terms given in it.

86. (*a*) and (*b*). The wholesale and retail prices of sugar have been as below—

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A	Rs. A.
1934—												
I . .	8 8	9 0	10 0	10 0	9 8	..	..	..	..	..	9 0	9 0
II . .	8 4	8 8	..	9 0	..	..	..	..	..	..	..	..
1935—												
I . .	9 4	9 14	9 12	9 12	9 12	9 12	9 12	9 8	9 14	10 4	10 0	9 8
II . .	8 12	9 4	9 4	9 8	9 8	9 4	9 4	9 4	9 8	9 12	9 12	8 12
1936—												
I . .	9 2	9 0	9 0	9 0	9 0	8 15	8 14	8 14	8 13	8 10	8 4	7 8
II . .	8 4	8 6	8 4	8 4	8 4	8 2	8 2	8 0	7 4	7 8	7 4	6 12
1937—												
I . .	7 5	7 0	7 4	7 4	7 0	6 12	..	..	..	..	..	..
II . .	6 12	6 12	6 12	6 12	6 8	6 3	..	..	..	..	..	..

87. The difference between wholesale and retail prices fluctuates widely because the retail purchaser is a weaker element in the market and the sellers fix a certain rate and generally stick to it. But since a year we find that the rates in the market are changing everyday and so the retail prices are also changed on account of the competition of the dealers to dispose of their stock as early as possible. Therefore, since a year the fluctuation between wholesale and retail prices has been narrowed down.

88. Dealers in the market have got quite a good arrangement for stacking their sugar because in the cities they are able to get such godowns which are moist proof. It is only inferior sugar that deteriorates, or bags that lie at the bottom also deteriorate, and the extent of deterioration is about Re. 1 per maund.

89. Yes, Indian sugar deteriorates more readily than Java as Java is more refined.

Now, the keeping quality of Indian sugar is improving, and there are some factories which are producing as good sugar as Java and if the Industry is allowed to develop freely without any hindrance or the burdens of excise duty, etc., it will very soon be able to produce sugar as good as that of Java.

90. Java sugra is preferred only in high class restaurants or by European community because this sugar is a bit more refined than an Indian one. But slowly and steadily Indian sugar is replacing Java.

91. Indian sugar is inferior to Java in crystal, whiteness and glitter. (*Note:*—Indian crystal is not as uniform as that of Java sugar.)

There are only very few factories that produce sugar which is considered to be as good as that of Java. Indian Sugar Industry has not yet had sufficient time to stand on its own legs. If allowed favourable circumstances, a time will come when Indian sugar may be as good as that produced by Java.

92. Formerly every factory was able to sell its sugar and clear its godowns. But since last year stocks are being over-carried even to the next crushing season. So far as we know the stocks have been over-carried by the manufacturers and not by the dealers. The extent of carry-over is reported to be about 50,000 tons in the last year.

It is the bank that finances the Industry. But the rate of interest according to market conditions is very high. The banks are charging 5 to 6 per cent. on the security of sugar stock.

93. The marketing survey of the Sugar Industry in India is very essential. If the factories combine and have an organised system of sale, the Industry will survive, otherwise, it will be ruined by internal competition.

94. If All-India Central Organization can be successfully evolved it will do an immense good to the Industry.

95. We are in favour of the standardisation of Indian sugar. But the Indian Industry will require some time to improve its quality when the standardisation will be more practicable and better.

The basis can be fixed only by comparing the sugar produced by various mills in India and not otherwise.

96. We have not sold a single bag on the basis of the standard prescribed by the Director, Imperial Institute of Sugar Technology, because the market is not fully conversant with the standards fixed by them.

(*b*) We do not think if much use has been made of these standards.

97. The definition of these standards should be made more brief and precise.

98. For the present if we establish a Central Sugar Marketing Board and if we are able to run that successfully for some time it is then and then alone that we can make further development in the sugar marketing.

99. The normal consumption of sugar in India is about 1,100,000 tons. There are great possibilities of increase in the sugar consumption, because from the consumption figures we find that the consumption of gur is 5 times more than the consumption of sugar and with the decrease in rates of sugar, gur is bound to be replaced by sugar and thus the consumption of sugar will daily increase in future.

100. So far as the sweetmeat trade is concerned, factory made sugar replaces gur to the extent of about 85 per cent. Gur is being consumed only in the villages in crude form.

101. Such side industries for the manufacture of sweets, syrups and fruit preservation can be started only when the Sugar Industry itself has obtained a stable position. When the Industry itself is experiencing difficulties for existence how can it attend to side industries?

102. We have not got with us the prices of imported sugar during the last seven years. During the last three/four years the price of Java has all along been about Rs. 10 per maund at the ports.

103. There are two reasons to say that the imported sugar has been landed on unremunerative prices since 1930, because with the grant of protection the Sugar Industry expanded in India which produced cheaper sugar to compete Java. Java had a surplus stock and in order to clear their stocks they dumped their sugar in India and at the same time they

wanted to crush the Indian Industry somehow or other. Therefore, they have been selling sugar here on unremunerative prices.

104. We do not think there has been any appreciable export of Indian sugar either by sea or by land. Such export is feasible if the British Government in England gives similar concessions to our sugar which it is giving to other colonial sugars.

105. The sugar excise duty of both 1934 as well as 1937 has very badly affected the Industry. The incidence of both the duties has considerably fallen on the manufacturers. If the Duty were imposed, this amount would have gone to the pocket of the manufacturers in the form of profits and they would have been able to build their reserves, etc., by which they would have stabilised the Industry by having their own farms and improving the quality of the cane and sugar.

106. There is no regular arrangement for marketing molasses. The same is sold either to distilleries or for private consumption in the Punjab.

107. An Indian Molasses Export Company has been started in Calcutta, but as yet it has not done any appreciable business. There are good possibilities of the development of export of molasses because it is a very useful commodity of out of which one can manufacture a number of things.

108. The measure of protection has been operated to its full extent. If the rate of protection were low, Java would have been able to succeed in sending its sugar here as they had made frantic efforts in the beginning.

The previous Tariff Board estimated the price of the molasses about Rs. 1-10, but now we find that all this molasses being sold at a nominal price of 1 anna to 2 annas per maund, and if the rate of protection were less it would have seriously handicapped the Industry.

109. We consider that the present rate of protection should be continued till 31st March, 1936, when the position may be considered again.

The Industry as it exists at present is hardly considered to be self-sufficient. If Java gets a slightest facility to compete Indian sugar it will do so for a few years even if it has to undergo some loss and thus crush the Indian Sugar Industry and will make frantic efforts to capture Indian market for itself. From general point of view, the Industry requires still some patronage to stand on its own legs. The Sugar Industry in India has not yet been able to establish itself on the same footing as it is in other parts of the world. We have made progress only so far as the manufacturing side of the Industry is still open for considerable improvement and the protection given can only be effective if the advantage given by one hand is not taken by the other by imposition of extra taxation.

110. The Government can give in various forms assistance to Sugar Industry other than the protective duty. Firstly, by the reduction of railway freight on sugar from the factories to the interior and as well as to the ports towns. The Railway freight is a very heavy burden on the Industry. If you please refer to the freight charges for the transportation of sugar in other parts of the world you will find that the railway freight in India has deprived the Industry of a considerable benefit which it would have otherwise achieved if the Railway has charged freight on the basis of transport charges of other countries of the world. Secondly, the Government should take necessary steps with the Local Board or should otherwise provide good roads to serve as a means of transport for cane from the interior to the factory. If the means of transport are made easy it will help both the cultivators as well as the factories, because it will ensure good deal of cane supply to the factories and it will be very much cheaper for the cultivators to bring their cane on metalled roads than on *kacha* roads. The Agricultural Department should look to the average needs of every cultivator about the question of transport of his cane, *i.e.*, they should provide them easy loans for the purchase of pneumatic tyred carts so that they may be able to bring double the weight with the help of the carts than otherwise. Thirdly, besides excise duty there is Income-tax and District Board tax levied on the factories. As lot of money goes away from

the pockets of the manufacturers in the form of excise duty, the rate of Income-tax should be decreased if it may not be possible to abolish. There should be no other tax such as District Board tax, etc. District Board levies a tax of Rs. 2,000 yearly on every factory. Fourthly, although there are very good Agricultural farms in India, but the development of the varieties of cane has not been widespread uptil now. Therefore, demonstration farms should be made a common thing in areas near the factories.

111. *Nil.*

The Upper Jumna Swadeshi Sugar Mills Co., Ltd., Muzaffarnagar.

Letter No. 132, dated 22nd/23rd June 1937.

With reference to your questionnaire addressed to the Upper Jumna Swadeshi Sugar Mills Co., Ltd., I beg to enclose herewith their various statements and replies to some of the questions. As the Managing Agents of this Company are also the Managing Agents of the Upper Doab Sugar Mills, Ltd., therefore they have not replied to all the questions here on which an expression of opinion was needed, as it has already been done in their replies to the questionnaire on behalf of the Upper Doab Sugar Mills, Ltd. Therefore the same may also be treated as replies on behalf of the Upper Jumna Swadeshi Sugar Mills, Ltd.

If required one or two representatives of this company will also appear along with those of the Upper Doab Sugar Mills, Ltd., to give evidence.

I am sorry we had to dismiss our Chief Chemist as his work was very unsatisfactory and therefore Form III could not be completed. If we are able to appoint a Chemist soon the same will be filled up and sent to you later.

All our statements and figures may kindly be treated as confidential.

Enclosure.

Replies on behalf of the Upper Jumna Swadeshi Sugar Mills, Ltd., Mansurpur.

1. The factory started working in 1932. Its original capacity was 400 tons. It has by making additions year after year a capacity of 750 tons in 1936-37 and is expected to have a crushing of 850 tons in the season 1937-38.

2. Quality.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1st Crystal	We are sorry that the record of qualitywise has been misplaced and quantities of different classes could not be ascertained.		51,102·5	84,890	158,905
I-A. Crystal			8,695	27,090	1,250
II. Crystal			7,690	16,780	30,472·5
Other Sugar			9,356·5	1,030	8,340
Total	40,486 Mds.	86,921 Mds.	76,844	129,790	198,967·5

3. (*a*) The factory is not at all situated advantageously neither in respect of cane supply nor in respect of facilities of rail, road and other communications.

There are not many feeder roads leading to the factory and the condition of the existing ones is very defective. There are one or two rivers over which temporary bridges have to be built by the factory and yet they are not able to take the whole traffic.

(*b*) The North Western Railway authorities do not allow the same facilities with regard to the traffic of cane as are given by other railways such as East Indian Railway and Bengal & North-Western Railway. The railway freight is much higher.

(*c*) It is not as much plentiful as in the East United Provinces.

4. *See* the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

5. No change has been made in the layout of the factory. This factory however, had been unfortunate in having placed orders for machinery with a Belgium firm which did not treat us fairly and supplied a very bad machinery, with the result that this factory did not work regularly in the first 2 or 3 seasons and caused heavy losses to the Company. The Company also had to spend huge amounts of money almost every year in replacement, renewal and additions. Almost all the main units have been changed with bigger units of better make.

A statement is enclosed herewith showing the additions and alterations from year to year (Appendix A).

6. A list of machinery that has been ordered this year is given separately *vide* Appendix B. These extensions have been done with the idea of increasing the capacity of the factory to about 850 tons a day, to allow the factory to work continuously without stopping for cleaning and to improve the curing sides so as to produce only one kind of sugar and of the best quality.

7, 8 & 9. *See* the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

10. Yes, we undertake the cultivation of sugarcane. The land has been taken on lease. The difficulties in leasing the land were as below:—

(*a*) To convince the owners of the land and to get them ready for leasing the same.

(*b*) In taking possession of the land from the tenants occupying the same.

11. (*a*) Total area held is 700 acres.

(*b*) Area under sugarcane in the last year was 320 acres and in the previous years was approximately 200 acres.

(*c*) Co. 312, 331 only at present and Co. 312, 331, 244, 313, 290 and 213, etc. were sown in previous years.

(*d*) Previously the rotation was cane after cane with green manuring. Now three years' rotation is observed from this year as noted below:—

1st Year	Kharif	Hempseed (Sanai).
	Rabi	Fallow under preparation.
2nd Year	Kharif	Sugarcane.
	Rabi	Sugarcane.
3rd Year	Kharif	Fallow (partly under Urd Juar, Moth Maize, etc.)
	Rabi	Wheat, Barley and Gram.

Municipal sweeping is also used as manure. A small quantity of compost is also used which is prepared at the farms from their own cattle.

(*e*) Average yield of the last year with sucrose content and time when tested:—

	Mds. per acre.	Average sugar on 100 part of cane. Up to 5th February 1937.	1st to 21st February 1937.
Co. 312	200	12·34	..
Co. 331	250 on heavy manuring	11·91	12·82
	200 on average „	..	..
Co. 213	175	11·17	..
Co. 310	..	11·48	..
Co. 313	..	12·68	..

The yield of other varieties is not available. The yield noted above was approximately the same in the previous years also of the same varieties.

(*f*) *Cost of cultivation per acre.*—Accurate figures are not available. Approximate expenditure was as follows:—

	Rs.	A.	P.
6 ploughing by Desi plough at Rs. 1-8 per ploughing	9	0	0
1 maund of hemp seed per acre for green manuring	2	8	0
Sowing expenses of hemp seed	0	8	0
Seed of sugarcane, 48 maunds at As. 4 per maund	12	0	0
Cleaning of above seed and carting at 9 pies per maund	2	4	0
Labour expenses for sowing of sugarcane . .	2	4	0
Bullock wages for sowing of cane . . .	3	0	0
One hoeing by Kassies (small spades) . . .	1	0	0
One hoeing by spades	2	0	0
2 to 3 watering at Rs. 5 per watering due to sandy soil	12	0	0
Harvesting and lorry loading expenses, etc., at 6 pies per maund	6	4	0
Rent of land at Rs. 1-8 per bigha on average	9	0	0
Manure Municipal, ½ lorry, *i.e.*, 3 lorries per acre at Rs. 5 per lorry	15	0	0
Manure Chemical, 1 maund per acre . .	5	0	0
Supervision charges	5	0	0
	86	12	0

Cost of cultivation approximately 6 annas 9 pies per maund.

12. (*a*) Area in experiments this year is 4·5 acres.

(*b*) A small quantity for sale of seed purposes.

13. Co. 331 has proved as medium late and 312 as early variety. The Agricultural Department of the province has been taking considerable interest in inspecting and advising of the operations.

14. Our farms are running since 4 years and since then the following change has occurred in:—

(*a*) The quantity of cane available—Insignificant.

(*b*) The quality of cane—Co. 312 has replaced Co. 213 and Co. 331 is also existing in ⅓rd of the area and seems to be a promising cane.

14. (*a*) The quantities at the gate are increasing every year.

(*b*) Quality of cane is also improving but it is not in any comparison to that of East United Provinces.

15. *See* the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

16. No, our factory is not assured of a sufficient supply of cane. We have to import large quantity of cane by rail from distant stations. The following are the principal varieties of cane crushed in our factory:—

Co. 312, Co. 213, Co. 290 and Co. 244.

17. The supply and the price of cane is much influenced by the competition of other factories specially in the months of February and March when the gate supply begins to dwindle.

18. (*a*) There is not much variation in the area but there is always a difference in the tonnage of cane.

(*b*) (i) If the rainfall is satisfactory, the crop yield is better and the tonnage increases.

(ii) High price of sugar gives a stimulous to cultivation of cane but this effects only the future supplies.

(iii) High price of gur and jaggery decreases the supplies at the gate.

19. It is a fact that the production of sugarcane in 1936-37 is the highest in record, but it is not in excess of the requirements in our area and we do not consider any restrictions necessary.

20, 21, 22, 23 and 24. *See* the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

25. The proportion of (*a*) gate cane and (*b*) rail cane is as under:—

1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
3 : 1	2 : 1	1 : 1	2 : 3	8 : 3

The variation from year to year has been due to increase in acreage and tonnage as well as the variation in the price of *gur* which is a governing factor in the western United Provinces.

26, 28, 29 and 30. *See* the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

31. As the gate supply is not even 50 per cent. of our requirements we do not issue any cards, etc., to our tenants. They are free to bring any quantity of cane at the gate. We consider that the normal period of detention of a cart at the gate in our factory is hardly 2 hours. The conditions during the year 1936-37 were rather exceptional whereas in previous years, weighment was done only during day time, this year we had to keep it going on throughout the day and night. The detention was also longer this year. In some cases it went upto 4 to 5 hours. On our side we consider that the question of prompt delivery of cane and speedy release of carts does not arise because we receive much less cane at the gate than we require and we have to supplement our supplies of cane by lorries and wagons.

32. No actual distance can be given regarding the cane transported by rail to our factory. It varies from time to time and year to year. This depends upon the supplies at the gate. This year we went out to bring cane from Moradabad side and Roorkee side only when there was partial strike at the gate during the month of February and then in the second week of April when the gate supply was nearly exhausted. But in the previous years, we had to bring our cane from stations beyond Moradabad on Bareilly side. The maximum distance from our cane station brought to the factory was 152 and we paid Rs. 49 per truck as railway freight which was about annas 2 per maund. The average time taken between cutting of cane and delivery at the factory is 5 days. Railway arrangements for transporting of cane are not at all satisfactory. Wagons are not given at the purchasing stations in sufficient numbers. They are detained at the junctions where there is much pilferage. I specially refer to Khan Alampura junction at Saharanpur.

33. Different railways follow different practice. On North Western Railway the freight per wagon is charged Rs. 8 for a minimum distance of 8 miles whereas on East Indian Railway it is Rs. 10 on 30 miles. This should be made uniform.

34 & 35. No.

36. A tramway is very advantageous for a factory as it leads to quick, continuous and fresh supply of cane to the factory. The difficulties in laying out of tramways for this factory are the same as for other factories, *i.e.*, of finance, of acquiring land and laying the tramway. This factory has a very good area of cane separated by a small river and cane from which area at present is brought by bullock carts with difficulty. If a tramway can be laid out in this area, it can easily supply the total requirements of the factory and confer a boon on the cane cultivators of this area.

This Company approached the Irrigation Department of the United Provinces Government which has constructed the Daurala Sugarcane Tramway to connect the Daurala Sugarcane Tramway with Mansurpur *viâ* Khatauli and Prakshitgarh on the upper end of the tramway. Both Khatauli and Mansurpur offered Irrigation Department to guarantee them the interest charges on their additional outlay. This would have been very advantageous both for the factory as well as for the cane growers.

In our opinion the Tariff Board should go into the question carefully and recommend to the Government the construction of small tramway for sugar factories on guarantee basis.

37. I have no idea about this.

38 and 39. *See* the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

40. We appoint agents to purchase cane from the growers. The terms of agency differ for agents who purchase cane at the railway stations from those who purchase at road side which is transported by bullock carts and lorries. To railway contractors we pay 3 pice per maund as commission which includes all expenses including driage. To lorry contractors on road side we pay 1½ pice.

41. Yes, a part of our cane supply is obtained from cane co-operative societies. The terms of our latest agreement with the District Co-operative and Sugarcane Supply Co., Ltd., Moradabad, are enclosed herewith (Appendix C).

42, 44, 45, 46, 47, 48 and 49. *See* the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

43. The average price of cane during the season is as under:—

1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
As. P.	As. P.	As. P.	As. P.	As. P.
5 2·3	6 4·09	6 9·4	6 4·83	5 0

Generally prices are increased in the end of the crushing season due to higher recovery and demand on account of ending of the cane season but this year the prices were down due to the very low prices of sugar.

50. The duration of crushing season including cleanings and stoppages is as under:—

1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
—	132	120	142	153

As will be noticed from the above statement, the working season of the factory is not sufficiently long for economic working. It should be at least 180 days looking to the seasons of the factories in Gorakhpur and Bihar.

51 and 52. *See* the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

53. Statement of skilled and unskilled labour employed in our factory is as under:—

Season.	Kind of labour.	Engineering Department.	Chemical Department.
Crushing season	Skilled labour	77 fitters and drivers 60 pumpmen and fitter coolies. 50 oilmen and 12 Bandhanies.	190 panmen, triple men, mates and centrifugal operators.
	Un-skilled labour.	48 coolies	129 coolies.
		175 un-skilled labour is employed for general work.	
Silent season	No labour is kept but when there are cleaning, additions and alterations in the factory, the labour is employed according to requirements, say about 90 skilled labour and 70 un-skilled labour.		

54, 55 & 56. See the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

57. Statement showing the fuel consumed is as under:—

	Rs.	A.	P.	
1932-33	28,546	14	0	
1933-34	24,453	10	6	
1934-35	18,934	4	11	
1935-36	35,583	13	11	
1936-37	21,000	0	0	approx.

58. See the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

	Season.	Molasses produced.	Amount recovered.			
		Mds.	Rs.	A.	P.	
59.	1933-34	49,360	3,480	7	3	
	1934-35	40,951	10,307	14	9	
	1935-36	49,345	8,393	11	9	
	1936-37	76,545	3,055	11	6	approx.

60. Principal markets of molasses with rate per maund from the factory:—

	As.	P.
Phagwara	2	5
Karnal	2	0
Ferozepur	2	11
Moga	2	7
Simla	4	5
Kasur	3	1
Hoshiarpur	2	9
Amritsar	3	0
Kalka	1	11

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Molasses is transported by tank wagons or covered wagons containing iron barrels, wooden drums and tins filled with molasses.

61. *Nil.*

62 & 63. See the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

	Season.	Stock in the beginning of season in mds.	Stock at the end of the crushing season in mds.
64.	1933-34	No stock	No stock
	1934-35	No stock	31,116
	1935-36	875	61,777·5
	1936-37	21,260	77,647·5

65. Arrangement of storage of sugar:—

(*a*) The sugar is filled in a twill gunny bags of 2½ maunds each and is stored in the godowns in high rows of 12 bags.

(*b*) The floors of the godowns are plastered with the cement. Under the plaster there is dry sand of one foot depth to avoid the moisture.

(*c*) The capacity of godowns is 75,000 maunds.

66 to 69. See the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

70. During the last two or three years, we experienced great difficulty in the supply of the wagons for the loading of sugar specially at the time when the North Western Railway has to interchange foreign wagons. Booking at time was kept in suspense for 8 to 10 days at a time. This results in great inconvenience and loss to the factory and they get challans accumulated to the extent of 6 to 8 thousand bags. In the interest of efficient and prompt marketing it is very necessary that this trouble should be avoided.

71. The wagons supplied for loading sugar should be waterproof by roof and the doors.

72. The sugar has only been sold at up-country centres in Punjab. The average price per maund for the different seasons is as under:—

Season.	Rs.	A.	P.	
1932-33	10	6	0	
1933-34	8	7	9	
1934-35	8	7	3	
1935-36	8	2	6	
1936-37	6	9	0	approx.

The prices are including excise duty.

Principal consuming centres with the freight rate per maund from the factory:—

	Rs.	A.	P.
Jullunder City	0	7	8
Peshwar	1	4	6
Lahore	0	10	6
Ferozepur City	0	9	3
Delhi	0	3	4
Rawalpindi	1	0	10
Moga	0	8	0
Amritsar	0	9	5
Meerut	0	1	10
Multan	1	0	9
Kasur	0	9	9

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73. Copies of Balance Sheets are enclosed herewith.

74. There are statements of depreciation written off enclosed showing also the difference in rates allowed by the Income-Tax Department (Appendix D).

75. *Nil.*

77. See the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

78. (*a*) Head office expenses:—

	Rs.	A.	P.
1932-33	4,759	3	0
1933-34	7,258	14	5
1934-35	6,052	8	9
1935-36	4,156	7	3
1936-37	2,095	0	0

(*b*) *Managing Agent's commission*.—Managing Agents get 15 per cent. in the profit but as there has been no profit, they did not get any thing.

79. *Nil.*

80. Forms * duly filled, are enclosed herewith.

81 and 82. The reduction of working cost in this factory is expected on account of two reasons:—

(1) *Increased capacity.*—This factory will crush about 100 tons a day more than last year.

(2) On account of bad recovery, this factory had been unfortunate in having rather low recovery of sugar partly on account of bad equipment but mainly due to the inefficiency of the chemist.

83. Cawnpore, Ahmedabad, Muzaffarnagar, Jullunder, Amritsar, Lahore, Multan and Rawalpindi.

84 to 111. See the reply from the Upper Doab Sugar Mills, Ltd., Shamli.

APPENDIX A.

Summary of Statement showing Replacements effected up to 15th November, 1933.

	Rs.	A.	P.			
Boilers	18,835	2	6			
Chimney	915	9	0			
Cane cutter engine	6,779	3	3			
Mills	13,510	5	6			
Bagasse elevator	1,070	4	3			
Engine parts	1,939	1	3			
Staging	10,678	12	3			
Pipes and pipes fittings . . .	4,649	14	6			
Pumps	8,198	3	9			
Filter press	1,380	0	0			
Injunction pumps	8,156	5	9			
Sugar dryer	3,436	9	1			
Sugar grinder	2,356	3	0			
Baffles for reducing temperature of boilers and castings of fire bars, of boilers and other parts of engine, pan, etc.	2,384	9	3			
Some of the miscellaneous stores purchased for repairs to machinery and plant	2,857	12	3			
Sugar weighing machine . . .	770	1	0			
Cement, etc.	7,743	2	0			
Labour	60,458	12	3	1,56,120	14	10
Add replacements effected during first working season				17,872	12	7
				1,73,993	11	5

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* Not printed.

Season 1933-34.

	Rs.	A.	P.	Rs.	A.	P.
Weighbridge	1,514	8	6	1,514	8	6
Furnaces	4,556	7	0	4,556	7	0
Vertical simplex	3,189	0	0	3,189	0	0
Engine, etc.	6,648	8	4	6,648	8	4
Centrifugal injunction pump . .	6,796	15	6			
Boiler tubes	819	8	0			
Other stores and salaries for general in the factory	60,000	0	0	60,000	0	0
				83,524	15	4

Season 1935-36.

	Rs.	A.	P.	Rs.	A.	P.
Crystallizers	3,004	0	0	3,004	0	0
Feed pump	3,748	12	0	3,748	12	0
Cooling plant	2,499	8	0	2,499	8	0
Tanks	1,442	6	6	1,442	6	6
C. I. Sulphur furnaces . . .	1,409	6	0	1,409	6	0
Centrifugal pump, filter press . .	17,663	12	5	17,663	12	5
Weighbridges	3,058	13	6	3,058	13	6
Vaccum engine	11,051	3	0	11,051	3	0
Massecuite pump	2,433	5	0	2,433	5	0
Staging labour	579	4	0	579	4	0
				46,890	6	5

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Season 1936-37.

	Rs.	A.	P.	Rs.	A.	P.
Mill engine	41,633	12	8	41,633	12	8
Boilers	37,281	14	5	37,281	14	5
Magma mixer	782	5	0	782	5	0
Miscellaneous stores, etc. . . .	20,331	9	5	20,331	9	5
				1,00,029	9	6
Total amount spent on additions and alterations upto season 1936-37				4,20,542	3	5

APPENDIX B.

List of machinery ordered for the season 1937-38.

	Rs.	A.	P.
2 sets cooling coils 2 grass hoppers 1 grass hopper conveyor 1 U-shaped magma mixer 1 sugar sifter	9,400	0	0
Injection engine pump with footvalve strainer	10,700	0	0
4 cast steel trash plates	800	0	0
3 dozen pan and quad. glasses	147	0	0
Pipes and special bends	1,215	0	0
Cane cutting knives	1,014	0	0
12 pairs coupling etc.	432	0	0
2 sulphitation tanks	733	6	0
2 extension belts	240	0	0
250 boiler tubes	4,750	0	0
One motor skatoskolo	1,789	0	0
One magma pump	1,347	0	0
2 pinions	840	0	0
2 molasses pumps	1,467	0	0
One vacuum pan	13,067	0	0
2 michrailis	2,000	0	0
One set of quadruple	57,333	0	0
Vacuum pump	14,000	0	0
	1,21,274	11	0
Plus 20 per cent. which includes all expenses of custom duty, clearing charges and railway freight, etc.	24,255	5	0
	1,45,530	0	0

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APPENDIX C.

Copy of Agreement with the District Co-operative and Sugarcane Supply Co., Ltd., Moradabad.

Agreement made this 23rd day of November, 1936 at Muzaffarnagar between the Upper Jumna Swadeshi Sugar Mills Co., Ltd., a joint stock Company registered under the Indian Companies Act, 1913, and having its registered office situated at Muzaffarnagar of the first part and the District Co-operative Sugarcane Development and Sale Society, Ltd., Moradabad, on the other part.

Whereas the first party owns a sugar factory, at Mansurpur and the second party is desirous of taking contract for supplying cane from different stations. The first party has agreed to give the contract and the second party has taken the said contract on the following terms and conditions:—

(1) That the second party will supply cane to the first party from the following stations:—

Hakimpur, Kailsa, Amroha, Kafurpur, Gajraula, Sherpur Bachraon, Mandi, Dhanora and Kankather.

(2) That the supply shall be uniform but if the 1st party requires the supply to finish earlier than 31st March, 1937 the second party will arrange accordingly without any indemnity from the first party.

(3) That the first party shall pay the price of cane received at the mills which will be the rate paid to the cane growers.

(4) That the second party shall get from the first party a commission of one pice per maund of cane supplied and 2 pies per maund of cane supplied as loading expenses. The driage during February shall be charged at 4 per cent. and in March at 6 per cent. provided that the wagon is weighed at the factory on the fourth day of despatch from the loading station. In case it is weighed after the fourth day, the first party shall pay 1½ per cent. per day in February and 2 per cent. per day in March as extra driage. The commission and driage will be paid on the weight of cane received at the factory. In case the wagon is not delivered to the factory within this time or is delivered late, the losses will be borne half and half between the first party and the second party. If the wagon reaches Mansurpur, the wagon will be considered to have been delivered to the factory.

(5) That the rate of cane purchased shall be the Government rate. In case there is competition and the rates go up it will be at the discretion of the first party either to stop the purchase or to continue the purchase. The second party shall take sanction from the first party in case of purchasing cane at a rate higher than that fixed by the Government.

(6) That the railway freight shall be paid by the first party.

(7) That the payment shall be made at Imperial Bank, Moradabad, every week.

(8) That in case the second party is not able to keep the contract the first party shall receive Re. 1-9 per hundred maunds of cane not supplied and if first party does not purchase cane from the second party, the second party shall get Re. 1-9 per hundred maunds. However, no party will be entitled to recover more than Rs. 500 as total damages on account of the failure of the contract by any party.

(9) That the first party shall not appoint any contractor or agent or make their own purchases at any of the station mentioned above.

(10) That the second party gaurantees to load a minimum load of 450 maunds of cane in wagon. In case the net weight of the cane in a wagon is less than 450 maunds the second party shall be liable to pay the corresponding loss in freight to the Mills. However, the average weight in wagon is more than 450 maunds the gain in freight will be divided equally between both the parties.

(11) That the second party guarantees to supply 4,500 maunds of cane every day from any or all of the stations. The second party shall be bound to arrange that supplies of cane is distributed to all the contracting mills after keeping due regard of freight from the dispatching stations to the Mills.

(12) That this contract will be in force from the 1st March, 1937 till 31st March, 1937 or earlier if the cane finishes. The first party be at liberty to take cane from the second party in the month of February also. The supplies taken into February will be deducted from the supplies to be made in March when calculating the damages for not taking cane in March.

(13) That in case the first party requires more cane from these stations, they will give option to the second party to increase their supply but in case they are not able to do so, the first party is at liberty to arrange for more cane. But the second party shall be bound not to discriminate between this mill and other mills. The second party shall distribute equally between this mill and other contracting mills in the surplus of cane.

(14) That the first party will supply two weighbridges and necessary beam scales and other printed stationery.

(15) That the second party shall maintain at their expense a clerk at the mills for getting records of weights of the wagons despatched by the second party.

(16) That the second party shall observe all the rules made by the Government under Sugarcane Act and will be responsible to make good to the mills any damages that may be caused by non-fulfilment of the rules by the second party.

(17) In case of any dispute between the first party and the second party the matter will be referred to arbitration. Each party shall appoint one arbitrator and both these men will decide the matter.

In case of difference of opinion between the two, they will appoint an umpire. His decision will be the final.

Upper India Sugar Mills, Ltd., Muzaffarnagar.

Introductory.

1. On 21st December, 1933 the factory began the manufacture of sugar. The full capacity is 600 tons.

2. The output for the last four working seasons are given below:—

Season.	No. 1 Sugar.	No. 2 Sugar.	No. 3 Sugar.	Total output.
1933-34 . .	61,415	10,800	3,082	75,297
1934-35 . .	34,754	52,807	2,708	90,269
1935-36 . .	96,160	47,304	36,250 Roris 2,086	181,800
1936-37 . .	134,937	65,037·5	24,605·5 Roris 2,750	226,500

3. (*a*) The factory is advantageously situated in respect of cane supply only. It is not advantageously situated in respect of Limestone, etc. It is partially advantageous with regards to its situation at the proximity of important markets.

(*b*) It has facility of rail, road and other communications.

(*c*) It has an adequate supply of labour.

4. Double sulphitation. Not worked with carbonitation.

5. (1) Dryer has been replaced by long cooling arrangement.

(2) One juice heater has been added.

(3) One filter press has been added.

(4) Cane carrier has been extended by 24″.

(5) (*a*) Four settling tanks.

(*b*) One seedling crystallizer.

(*c*) One Magma for seedling crystallizer.

(*d*) Two molasses storage tanks, have been added.

6. Two mills, one pan, six pan supply tanks, two press, two crystallizers and a battery of 12 centrifugals.

7. (*a*) (1) Availability of raw material at the gate.

(2) Accessability of important markets.

(3) Market price of sugar.

(4) Modern design of plant.

(*b*) 600 tons.

9. Yes, none.

Raw Materials.

10. No.

The zamindars have an exaggerated idea of the prosperity of this industry and generally demand ten times the market value of the land.

11. No.

12. None.

13. The company is under the contributory cane development and marketing scheme of United Provinces Government. Only a beginning with regard to early and late varieties of cane has been made. The results will be available after a year or so.

14. (1) The old country variety is being replaced by Co. varieties which contain a higher percentage of sucrose and give a greater yield per acre.

(2) An impetus to cane cultivation has been given and the area is steadily on the increase.

15. The loss of sugar content in cane due to damage from frost has not been perceptibly noticed here. The loss due to disease or insect pest is sometimes very great ranging upto 3 per cent. of sugar in cane. This latter loss was experienced during the season 1934-35.

16. (1) Yes.

(2) Co. 213, 290, 244 and 312.

(3)

Variety.	Sucrose content.	Variety	Sucrose content.
313	12·31	244	11·79
213	10·38	312	12·34
		331	13·32

17. During the years 1934-35, 1935-36 the crushing capacity of the mills exceeded the supply and the prices of cane moved upto annas 8 per maund, at the various railway stations on account of the competition of the sister factories. This year the prices of sugar being low and the supply being abundant there was no competition and generally the minimum price fixed by the Government was paid.

19. The production of sugarcane is not in excess of our requirements in our area and we consider that any restriction will be injurious.

21. The chief difficulty is bad condition of roads and want of culverts over water courses. It is necessary to develop country roads and arrange for their maintenance.

22. (*b*) We are not in favour of allotting particular areas to different factories as it will be definitely against the interests of the cultivators. At present he is free to go to the factory which gives greater facilities to him and does not keep him waiting in the matter of weighment or payment. There is no danger of uneconomic competition for cane between the factories since by better experience they have learnt to be very careful in these matters. The working of zoning will entail additional work without any compensating feature.

24. (*a*) Yes.

(*b*) Licensing of new factories and limitation on extension is necessary as sugar is being produced in excess of requirements and consequently the prices of sugar have gone down to an uneconomic level.

25. The ratio of gate cane to rail borne cane is 2 : 1. The proportion has varied from year to year due to development of cane area in the mill locality.

26. Our gate cane is entirely transported by carts. The average weight of cane carried by carts is 23 maunds. It is not possible to replace country carts by rubber tyred ones as the cultivators in our area are too poor owing to Zamindari system.

27. No. The main road is good but the feeder roads are neglected and uncared for. There are deep routs in them and in the rainy season they are impassable.

28. Roughly from a radius of 8 miles round about factory, eight to ten hours. No protection from deterioration.

29. One pie per maund per mile.

They employ their own carts. Very few people hire carts and the cost of hiring does not exceed 1 pie per maund per mile.

30. No.

31. The arrangement is partly in the hands of Sugarcane Marketing and Development Officer and partly in our own hands. Canvassers are regularly send to villages and in the beginning of season a programme is drawn up for supply of cane, which is not rigid. Normal period of detention at our factory, is about 4 hours. The number of weighbridges has been increased and adequate labour is maintained to unload the carts quickly. After a cart has been weighed prompt payment is made to enable the cultivator to return home without undue delay. Part of the cane is put direct from the carts into the carrier and part is stacked in the yard for night loading.

32. The cane is transported on rail from 14 to 100 miles. Average time taken between the cutting of cane and delivery at factory is roughly 60 hours. The railway arrangements for transport of cane are quite unsatisfactory as long detention takes place at junction stations and there is pilferage of cane *en route*.

33. Railway freights are calculated on mileage for flat wagon load. The East Indian Railway increased their rates last year. We would like to retain the present basis of railway freights as the maundage rate will result in further unnecessary detention of cane. Besides all stations are not provided with weighbridges.

34. Freight is too high for limestone and for manures.

35. None.

36. Yes. The initial outlay is rather heavy.

37. In the delivery of cane by road no deterioration happens whereas in the delivery of cane by rail deterioration happens to the extent of the fall in purity by about five degrees.

38. 3 : 1 through contractors.

39. None.

Seed, manure, and technical advice is provided on behalf of the factory by the Cane Development and Marketing Officer.

40. In case of cane not purchased direct from the growers, we purchase partly through Government Co-operative Societies and partly through licensed purchasing agents. We generally pay 3 pies per maund commission *plus* loading charges and driage.

41. We purchase through Co-operative Sugarcane Supply Societies on terms given in reply of question No. 40.

42. A number of cart weighbridges are maintained. The payment is made at the time of the delivery of cane.

43. The average price of cane paid to growers during the past seasons was as follows excluding cost of transport, commission, etc.—

1933-34.	1934-35.	1935-36.	1936-37.
...	5·54	5·53	4·44
6·44	6·60	6·46	5·003 cost at factory gate.

44. Yes. Moreover the price of cane is also governed by the price of *gur* (Jaggery). The cultivator studies in the market from day to day and decides to make gur or sell cane accordingly.

45. See answer to question No. 44.

46. Yes.

47. Yes. We have been paying ½ anna per maund more at the gate in competition with *gur*.

48. Yes. No suggestions.

50. The duration of the crushing seasons are as under:—

Season.	No. of working days.
1933-34	84
1934-35	108
1935-36	140
1936-37	151

In the first year we commenced crushing late owing to delay in erection but the season ended on 12th March due to scarcity of cane.

Second year again we had to close on 12th March due to cane shortage. Third season we could go upto 22nd March and this year we continued upto 15th April but the low prices of sugar made it uneconomical for us to continue specially when the gate cane was finished.

51. With the present low figure of consumption per head it is not much use extending the crushing season.

52. Yes.

Labour.

53. In the crushing season skilled labour hands. Unskilled labour men. Silent season skilled labour. Unskilled labour.

54. Most of the manufacturing staff comes from Eastern United Provinces and Bihta.

55. All our skilled labour is Indian.

56. Free quarters are provided for the labour and a free dispensary in charge of a qualified doctor is maintained.

Power.

57. No. We have to use coal and firewood too to the extent given below:—

	Consumed per cent. cane during season.			
	1933-34.	1934-35.	1935-36.	1936-37.
Wood	2·70	1·33	1·07	·64
Coal	2·30	·786	·51	·181

No.

58. Molasses.

	1933-34.	1934-35.	1935-36.	1936-37.
Per cent. cane	4·000	4·051	3·705	3·400
Quantity	35,500	50,000	70,000	80,000
Price . . Rs.	604-13-6	11,456-2-9	15,706-0-0	3,228-2-9

Variations in percentage being higher sugar content in cane.

61. We send our molasses to Punjab. It is also sold locally in small quantities.

No. Railway facilities are inadequate as the tanks on North Western Railway are few.

Average freight rate is 11 pies per maund mile 100.

Yes. It is good for cattle. Propaganda and demonstration is necessary to popularise it among the rural population. It can so be used as manure. But these measures will only be tentative. The Government should establish power alcohol plants in central places.

62 & 63. *Nil.*

64. Figures of stocks of sugar at the beginning and close of each crushing season are as follows:—

	1933-34.	1934-35.	1935-36.	1936-37.
Beginning	...	...	...	482·5
Closing	...	...	67,578	83,130

65. We have pucca godowns. The present capacity of our godowns is 45,000 bags.

We built one godown last year and contemplate building another this year.

66. The sugar absorbs moisture and loses some of its lusture. It is due to the fact that water level in the area is high.

67. We sell it outright at reduced rate.

69. In the rainy season to a considerable extent sugar is damaged in transit. Part of it is due to negligence of railway as at this time they book sugar at owners' risk and do not care much what happens to it.

70. Yes. The transportation arrangements are very bad on the North Western Railway. There is generally shortage of empties. No empties are kept in imprest and there has been considerable delay in the delivery of sugar in the market.

71. None.

72. We sold all our sugar to up-country centres.

73. The railway freight rates to the markets we supply are as follows:—

Balance Sheets are enclosed.

74. Yes. Please see the Balance Sheets.

75. Please see the Balance Sheets.

76. The dividend paid for the year 1933-34 amounted to Rs. 45,701-6-3 During 1934-35 no dividend was paid. During 1935-36 Rs. 1,01,401-6-0 were paid.

77. Arrangements are made with Bank.

78. The following amounts are paid:—

(1) Rs. 1,000 per mensem.

(2) 1 per cent. commission on sales.

(3) 5 per cent. of the net profits.

79. 10 per cent.

80. Forms * are enclosed.

82. No room for economy.

83. Cawnpore, Muzaffarnagar, all Punjab, Sind and Baluchistan and North-West Frontier Province.

85. Yes. The recently revised form is alright.

94. Yes.

96. None. No.

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* Not printed.

Amritsar Sugar Mills, Ltd., Muzaffarnagar.

1. The year of beginning—January, 1934.

Full capacity—1,000 tons per day.

2. Output—

——	1934.	1934-35.	1935-36.	1936-37
	Mds.	Mds. Srs.	Mds.	Mds. Srs.
Sugar No. 1.	59,459	96,812 26	212,482	299,865 35
Sugar No. 2.	26,275	39,915 20	31,357	22,965 0
Total .	85,734	136,728 6	243,839	322,830 35

3. (*a*) Cane supply—Yes. Raw material—No.

(*b*) Rail facilities—Yes. Road and other communications—No.

(*c*) Labour—Yes.

Our process of manufacturing is double sulphitation. In the sulphitation process the plant is less expensive and the process is cheaper to work. On the other hand the carbonitation process is more positive and its action yields a higher recovery and the sugar produced is a better keeping quality. But as far as profits are concerned it makes no difference whether sugar is manufactured by Double Sulphitation or Carbonitation.

5. We have extended a new press, 6 centrifugal machines, a new heater, one crystallizer, one sulphur oven extended our cane are extending bagasse carrier.

Total cost of the new layout and replacement, etc., is about Rs. 95,000.

6. We intend to instal a new evaporator, one juice heater, are replacing old sulphitation tanks, erection of one more boiler, one pan and a few centrifugal machine.

7. (*a*) (1) The size and number of rollers of the mills.

(2) Milling efficiency.

(3) Boiling House capacity.

(*b*) Not less than 600 tons per day capacity plant.

8. 5 to 10 per cent. of the equipment is obtainable in India. All the rest is to be imported from foreign countries.

9. (1) No, we have never received any assistance.

(2) Local Government should help us in the improvement of roads and communication with our interior villages and supply depots. It should spend in the improvement of cane qualities and to do good for farming of the crop.

10. Yes, a very small area.

To get land is very difficult due to Land Alienation Act.

13. We get no assistance from Agricultural Department, otherwise there is no doubt that the soil in our locality can produce every variety of cane.

14. (*a*) The sowing of cane is increasing every year.

(*b*) The quality of cane marks no difference. 80 per cent. of the cane is liable to be damaged by frost and disease.

15. 80 per cent. of the cane is liable to be damaged by frost and disease as mentioned above.

16. Yes, at present Co. 312 is sown by the cultivators.

Average production—80 maunds per Bigha Khamm.

Average—9·5 per cent. sucrose.

17. If there is zoning system ¾th of our daily requirement can be obtained at the factory gate.

18. (*a*) It is increasing.

19. (*a*) No.

(*b*) Within ten to fifteen miles radius of a factory cane production be encouraged beyond this if it is discouraged it does not effect the sugar factory, but to import cane from beyond 15 miles, there should be proper arrangements of good roads and communication.

21. Shortage of water supply for irrigation.

Proper roads leading to the factory.

The roads and bridges should be made.

22. (*a*) Some factories cannot do their own farming due to financial difficulties, the others, who can manage, feel trouble in acquiring the land, which is all due to present law, regarding purchase of land.

24. (*a*) License necessary.

(*b*) Further erection which effects the increase in capacity to be checked.

25. (*a*) Gate cane ½ of total requirement.

(*b*) Lorry cane ⅙th of total requirement.

(*c*) Tram cane ⅓rd of total requirement.

Lorry cane can be increased if roads are improved and metalled. It also saves cultivators a lot of trouble. More cane can be imported from outstation provided the railway freight is decreased.

The purchasing rate should also be less by 6 pies per maund at outstation, than that of Government rate. Average load per cart is 18 maunds. Lorries are also used for the transportation of cane from beyond five miles. The country carts cannot bring weight due to very bad roads.

27. The roads in this area are very bad. They are all kuchha and there is no bridge over khals, streams and such places. It is very difficult for cartmen to bring carts to the factory.

28. One day.

29. Generally they have their own carts. Cost of transportation of cane is 1 pie per maund per mile but where there is sandy road we pay 1½ pie per maund per mile.

30. No.

31. The detention of carts is not more than 4 hours. Weighment is done during the whole 24 hours. Card system is observed to regulate the supply of cane but generally it is seen that selfish farmers miss their cards purposely and disturb the arrangement.

32. 72 miles—4 days—sometimes the cane wagons are detained at the junction stations and take more time.

33. *Mileage basis*:—Railway freight has been reduced by the North Western Railway, but has been increased by the East Indian Railway. Flat rates are being charged and it is alright to let it continue.

34. For lime we have got special rate of freight, similarly special rates be charged for sulphur and other chemicals, generally used in the factory.

36. No.

37. (*a*) Yes. Trouble is in acquisition of land.

(*b*) No.

38. (*a*) ½ direct, ½ through contractors.

We have been distributing seeds to farmers.

Advances are not being made.

40. Contractors are paid 7½ pies per maund f.o.r. mill delivery and 3 pies per maund for station delivery.

41. Same as to contractors.

42. We weigh the whole of the cart at weighbridge and then re-weigh the empty cart. Thus we calculate the net cane contained in a cart. The payments are made immediately and the payment office remains open from 6 A.M. to 10 P.M.

47. Yes.

50. 1934.

1934-35.—129 days. Cane crop being abnormally bad.

1935-36.—137 days. Shortage of cane and high rate of cane.

1936-37.—156 days. Decrease in the market price of sugar and increase in Excise Duty.

51. No.

53.(1) For mechanical work—from Punjab (mostly).

(2) For chemical work—from Bihar (mostly).

(3) Unskilled labour is employed locally.

54. Nearly the whole of the skilled labour is imported from Punjab and Bihar, but not from outside India.

55. We have never employed any foreigner.

56. We have erected sufficient number of both family and single quarters for the accommodation of both skilled and unskilled labour. We have employed a diplomed Doctor and maintain a free out-door dispensary which is also free to public in general. The quarters are white-washed every year and are kept neat and clean. Latrine system is very satisfactory, and the quarters are very healthy. Water supply is sufficient.

57. Yes, we meet our requirement from Bagasse. Only a very small quantity of coal and firewood is used in the beginning, of the crushing season or when there is any stoppage of long duration, otherwise bagasse supply is quite satisfactory. We have about 3,000 tons of bagasse at the close of the season. We do not bale this surplus bagasse, but burn it as refuse.

58. Molasses, Bagasse, Press-Cake.

59. Price of molasses in 1934 was 6 pies per maund and during 1935 and 1936 and present day price is annas 2 per maund. The variation in price is due to over-production.

60. Our market for molasses is Punjab. Railway facilities for the supply of tank wagons is inadequate.

61. We sell our molasses. The factories should be allowed to have their own distilleries.

62. The bagasse is supplied to Strawboard Manufacturing Co. free of charge. If the railway freight on bagasse is reduced it can fetch price from the paper mills.

63. Press-cake is best manure and we distribute the same to the cultivators free of charge.

65. Our godowns are made to hold 50 thousand bags. We have increased the old godowns to this extent. We contemplate further extention of the godowns.

66. As we have long rainy season, so some of the sugar gets slightly wet causing slight inversion.

67. It is sold.

68. Very slightly.

69. No damage in transit except pilferage.

74. Yes, this non-supply of empty wagons for the despatch of sugar is a source of great trouble and loss.

71 and 82. No.

83. The Punjab and North-West Frontier Province.

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The Upper Doab Sugar Mills, Ltd., Muzaffarnagar.

Letter No. 178, dated the 22nd/23rd June, 1937.

With reference to your questionnaire addressed to Messrs. Hari Raj Swarup Rajendra Lal Debi Prasad & Bros., Managing Agents of the Upper Doab Sugar Mills, Ltd., I enclose herewith a copy of our replies along with the various statements required by you with six spare copies. I trust our replies will receive due consideration of the Board and if the Tariff Board thinks it necessary our company will be willing to send their representatives for giving oral evidence before the Board.

It will suit me very well if an idea can be given to me of the approximate date and month and place where evidence is likely to be taken if any, and how many representatives of the company the Board will prefer to appear before it.

Some information about the wholesale and retail prices of sugar in the areas covered by our distributing centres under question 86 has not yet been collected. As soon as it is ready it will be sent to the Board.

As we did not have printed Balance Sheets of the year 1933-34, six copies could not be typed. They will be forwarded later. All our figures and statements included in Appendix should be treated as confidential. Our reply to question 105 on excise will be forwarded shortly as it could not be completed.

Enclosure.

REPLIES TO QUESTIONNAIRE BY THE UPPER DOAB SUGAR MILLS, LTD.

Production of Sugar.

1. This factory started crushing in the year 1933-34. The plant originally was of 600 to 800 tons capacity. After making certain additions the space for which originally provided by the manufacturers the capacity of the plant from the season 1937-38 will be 1,250 tons of cane per day.

2. The output of sugar of the factory for the last 4 years has been as follows:—

Season.		Quantity. Mds. Srs.	Quality. No.
1933-34		60,602 20	1
		36,365 0	1A
		1,592 20	2
	Total	98,560 0	
1934-35		29,775 0	1
		10,100 0	1A
		765 10	2
	Total	40,640 10	
1935-36		133,537 20	1
		72,010 0	1A
		3,622 20	2
	Total	209,170 0	
1936-37		241,600 0	1
		88,935 0	1A
		26,134 0	2
	Total	356,669 0	

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3. (*a*) So far as cane supply is concerned the factory is quite advantageously situated except that the factory cannot get more than half of its requirements at the gate.

The factory is also advantageously situated so far as the sugar market is concerned. There being only two or three factories in the Punjab most of its requirements of sugar are supplied by the factories situated in the Western United Provinces and the Shamli Sugar Factory also supplies all its sugar to the Punjab.

As regards lime-stone, fire-wood, coal, etc., the factory is not advantageously situated as all these commodities have to be brought from long distances in the Punjab and Bengal. We get our lime from Dandot, Lilla and Golpur in the Punjab and its quality is much better than that of Katni and Satna.

(*b*) We are served by the Shahdara Saharanpur Light Railway and are able to tap the cane area round this railway upto Saharanpur on the North and upto Kasimpur Kheri on the South, the stations between Kandhla and Kasimpur Kheri being common supplying centres both for Baraut and Shamli. The railway administration tries to give adequate facilities as regards time and number of trains to be run but are not able to provide sufficient number of cane trucks.

We have only one pucca road extending about 8 miles on the West and 24 miles on the East but this road is maintained by the District Board and is in very awful condition. On the East no Motor Lorry carrying sugarcane can be run as one or two bridges are under-capacity and damaged. The village kuchha roads are not looked after by the District Board and the factory tries to maintain some of them but as there is no sanction behind this work, the roads soon become bad and during the rains some of them become impassable.

(*c*) The supply of labour is adequate but skilled labour has to be imported from Gorakhpur or Punjab. It is however expected that in two or three years' time this difficulty will disappear.

4. Carbonitation process yields better and uniform sugar while sulphitation process is simple to work with. It is also said that carbonitation sugar is of better keeping quality and also yields better recovery. As regards quality some Chemists are of opinion that even with the double sulphitation plant as good sugar can be produced as with carbonitation if certain changes are made in the sugar curing section. Following these suggestions, we are carrying out extensive changes in our sugar curing section so that very best quality of uniform sugar may be manufactured.

The question of keeping quality indeed is very important specially in India where the sugar suffers in quality on account of sudden changes of temperature and on account of the rainy season.

It is not easy for every factory to take to carbonitation process as it involves expense from 1 lakh to 2 lakhs of rupees depending on the size of the factory as well as difficulty in availability of lime stone.

5. No change has been made in the layout of the factory. Only one Boiler 3,900 sq. ft. heating surface and one complete spray plant was added in 1934 and one filter press of 650 sq. ft. and two 36″ centrifugal machines and pump ends of bigger size, and one mud pump were added in 1936. Amount spent on the above additions in 1934 is Rs. 63,335 and in 1936 Rs. 18,328-6.

6. We propose to make the following additions this year:—One Mill, one Boiler, one Sulphur Furnace, one Air Compressor, one Filter Press, one Juice Heater, one Triple Effect Evaporator, one Air Pump, one Pan, one Injection Water Pump, 14 Centrifugal Machines, 3 Molasses Pumps, one Geared Turbine Pump, for driving the Centrifugals, two Crystallisers, one Sugar Cooling Grass-hopper and one Sugar Cooling Tower, two Magma Mixers with Magma Pumps. Their total cost is expected to be Rs. 3,07,750.

7. (*a*) The main factors in our opinion which determine the size of an economic plant in the Sugar industry in India at the present time are the following:—

(1) Rate of Excise duty.
(2) Price of cane.
(3) Price of sugar.
(4) Recovery percentage of sugar.
(5) Duration of the crushing season.

(*b*) This is a very difficult question as factors which determine the size of the smallest economic plant are so variable from time to time and are subject to such sudden changes that it becomes very difficult to fix these factors in order to enable us to determine the size of an economic plant. Looking to the size of factories that now exist in India we should say that the average size of a factory that should be taken as the smallest unit in India during the remaining period of protection should be a factory with a daily crushing capacity of 500 to 600 tons of cane per day. But the present prices of sugar have sunk to such a low level and if they stick to it or go below, it is impossible for a factory of this size or even a much bigger one to exist. Mr. R. C. Srivastava made the following statement during the course of discussions in the Sugar Committee:—

> "That the cost of cultivation of sugarcane to-day was very near that of 1931-32 whereas during the same period the manufacturing cost of sugar in modern factories had come down about 40 per cent. from about Rs. 2-13 to Rs. 1-10 per maund including depreciation and interest. The cost included the work cost, stores, salary and wages, repairs and renewals and 6 annas for depreciation and overhead charges. This cost applied to a factory of 800 to 900 tons capacity getting 9½ per cent. recovery".

These are ideal conditions, though these figures are corroborated by the figures of our Shamli factory: They are, however, not likely to be attained in every factory. In this factory the average price of cane was 4 annas 9·8 pies per maund and therefore the cost per maund of sugar came to Rs. 4-11-6·80 per maund. If we add Rs. 1-8 per maund as excise the total cost price per maund of sugar is Rs. 6-3-6·80. At the present rates of sugar even this factory is not likely to make any profits whatsoever.

A majority of factories in India, however, are of a much lower capacity than 800 to 900 tons. Therefore if the present state of affairs continues, in our opinion about 50 to 60 per cent. factories will not be able to work next season, unless the price of cane drops to 3 annas a maund or the rate of excise duty is reduced or the price of sugar goes up. Therefore the Tariff Board has seriously to devise means whereby the above conditions may be fulfilled, *i.e.*, the price of cane be reduced, the excise duty may be decreased and the price of sugar is maintained at a fair level, so that factories of 500-600 tons capacity may be able to exist.

8. Machinery manufacturers manufacture the following sugar machinery in India:—

> Crystallisers, Centrifugal machines, Dryers, Sugar sifters, Sulphur ovens, Cast iron pipes, Shells of rollers, Trash Turner plates, Mill bearings, and also some kinds of pumps.

9. (*i*) The Imperial Institute of Sugar Technology as a matter of fact, has come into existence only for the last year. They are turning out students who are useful Assistant Chemists, Bench Chemists and as supervisors but the institute has not yet been able to provide higher technical staff. Athough weekly and fortnightly reports are submitted to the Imperial Institute of Sugar Technology but the factories are not benefited with the technical criticism of these reports. In our opinion some means should be devised by which more close and practical contact should be established between the Institute and the factories. It should be in our opinion investigated if one or two officers are attached to the Imperial Institute who

should inspect the factories at least twice during the season so that the technical working of the factory should be brought to a uniform high standard. It will save much unnecessary loss which a large number of factories suffer on account of bad technical control. In our opinion as the Government earns 3 crores and 75 thousand of rupees of excise it should be their duty to provide sufficient technical supervisory staff for this purpose. If this method is adapted it will increase general percentage recovery of the whole country and thus increase the income of the Government. It will also bring down the cost of production and also check a number of Chemists and Engineers from committing frauds on the factory owners who are still inexperienced.

(*ii*) The Industries Department of our Local Government does not give any help whatsoever and in our opinion it is not capable of giving any assistance to the factories.

10 & 11. No.

12. Does not arise.

13. No.

14. (*a*) The quantity of cane available for this factory has increased from year to year both at the gate as well as at outstations.

(*b*) In our opinion the quality of cane has also improved though not as much as we wished. During the season 1934-35, the whole cane of this locality was badly damaged with disease and later by frost which brought down the brix of cane to as low as 1 per cent. and purity as low as 42. As a result of this the recovery went down to below 4 per cent. and the factory had to be closed during the middle of the season and suffered a heavy loss. After this attack of disease and frost the cane appears to be steadily improving in quality. Last year some effect of the disease of 1934-35 was noticed with the result that the general recovery of this factory was about ·75 to ·8 per cent. lower than the factories on the North-Western Railway. The cane has maintained this improvement and showed much better result this year so much so that the average recovery of this factory all of a sudden jumped up to 9·5. It is, however, impossible to say whether the improvement that has taken place this year will be maintained during the succeeding years, or is simply due to certain special factors of this year, such as well distributed rainfall, absence of disease, etc. The average brix, sucrose and purity of mixed juice for the last 3 years are given below:—

——	Brix.	Purity.	Sucrose.
1934-35	8·63	69·59	13·24
1935-36	11·54	76·37	17·02
1936-37	13·08	79·03	18·60

and fibre in cane for these 3 years has been 11·60, 14·16, 14·92.

15. In this part of the province cane is greatly liable to damage from frost, disease and insect pest because in West United Provinces the monsoon is the main determining factor for the incidence of damage from frost, disease and insect pest. The well distributed rainfall with a few falls in September and October will remove disease and insect pest. Similarly a rain about X'Mas or early January may considerably reduce the chance of a frost. It is very difficult to estimate the actual percentage of loss from these causes but sometimes as in 1934-35 the combined effect from all these causes may be as high as 90 per cent. In ordinary years the loss from disease can safely be estimated at 10 to 20 per cent.

16. Our factory does not get all its requirement of cane at the gate with the result that we have to import at least ⅓rd to half of our requirements by rail. This cane is not as good as the gate cane. The principal

varieties are Co. 244, Co. 213, Co. 290, and Co. 312, the lastnamed variety is a good factory cane and it is becoming popular with the growers.

17. The factory does not have to face any competition in the purchase of cane from other factories except when it goes to obtain part of its requirements on the Broad Gauge, *i.e.*, North-Western Railway and East Indian Railway stations, where it has to meet competition with the factories that are situated on the North-Western Railway and East Indian Railway. In the season 1935-36 on account of competition of the factories, the price of cane towards the end of the season went up as high as 8 annas and 9 annas a maund. This high price led to a sudden increase in the area under cane cultivation. The result of this increased cultivation was an enormous rise in cane supply during the season 1936-37 with the result that there was little or no competition in the price of cane and the factories obtained their requirements easily.

18. (*a*) We give below the figures for the last 3 years of the important areas which serve this factory with cane and it will show that there has been an increase in acreage from year to year except 1935-36 because of total destruction by frost in 1934-35:—

——	1934-35.	1935-36.	1936-37.
Pargana Kairana . .	2,968	2,170	2,721
,, Shamli . .	10,589	9,578	10,649
,, Thanabhawan .	4,451	3,485	4,803
,, Jhinjhana .	4,874	4,154	5,184

(*b*) In our opinion the most important and governing cause for this increase in acreage of sugarcane has been the fact that on account of depression in the price of agricultural commodities sugarcane is the only crop which gives a grower great income.

As will be clear from the state given below, the price of *gur* has been fairly steady during the last 3 years and on account of the large number of sugar factories the cane growers got a ready market for their cane and two facts combined led to continued increase in the sugarcane acreage round about the factories as well as away from the factories:—

Gur prices in the Shamli market (seers to a rupee).

——	November.	January.	March & April.
1933-34 .	9 to 9½	10½ to 11	9 to 10
1934-35 .	12 to 13	12	11½
1935-36 .	8 to 8½	12 to 12½	10½ to 11½
1936-37 .	12½ to 13½	13½ to 14½	16 to 16½

Rainfall does affect the yield per acre because if it is well distributed and sufficiently late in September and October it will increase the tonnage per acre to a great extent and this increase in tonnage does lead to increased supply for factories. Rainfall, however, does not effect the variations in acreage.

19. The production of sugarcane in 1936-37 so far as our factory is concerned is not in excess of our requirements. This year we continued crushing upto 9th May, 1937 and exhausted all the cane round about our factory and on the Shahdara Saharanpur Light Railway upto Saharanpur so much so that we had to bring some cane from East Indian Railway in order to supplement the cane that we were getting locally or on the Shahdara Saharanpur Light Railway. The area round about our factory has still to develop considerably in order to meet our increased demand for sugarcane which we estimate to be about 33,000 maunds of cane per day from the next season.

20. The outturn of cultivator in the area round about our factory at Shamli differs from year to year depending upon the quantity and distribution of rainfall and incidence of disease. In this area the growth of cane is more luxuriant though there may be less sugar in cane. The tonnage per acre is more and I think the average can safely be estimated at 400 maunds per acre. The undersigned (Hari Raj Swarup) has no clear idea about the cost of cultivation of a cultivator per acre because it differs from one part of the province to the other and in the same part from one district to the other. The undersigned (Hari Raj Swarup) maintains a private farm in his own landed property and the average cost of cultivation on one and a half acres is as follows:—

	Rs.	A.	P.
(1) Ploughing	22	8	0
(2) Seed	22	4	9
(3) Irrigations three	13	8	0
(4) Manure:—			
(i) Country	22	8	0
(ii) Chemical	15	0	0
(5) Hoeing	23	0	0
(6) Rent of land	27	0	0
(7) Binding or earthing	3	15	0
(8) Cutting	9	0	0
(9) Carting	13	8	0
(10) Overheads	15	0	0
	187	3	0

Expected yield 900 maunds = about 3 annas 4 pies per maund. This however, cannot be a guiding factor in ascertaining the cost of cultivation by a grower. As a matter of fact active steps should have been taken by the Government to ascertain these figures as correct decision and right conclusion on problems of the sugar industry depend mainly upon the correct information about the cost of production of sugarcane for the cultivator and cost of manufacture for the factory owner. I understand the Imperial Council of Agricultural Research is carrying on certain enquiries about the cost of production of certain crops including sugarcane. I do not know when it will be completed and how far it can be relied upon.

21. The main difficulty of the cane grower in the cultivation of cane is his poverty and uneconomic size of his holding. On account of his poverty he is not able to invest sufficient money in the cultivation of cane. It requires great manurial food and care and attention. The cultivator does not provide sufficient seed and then sufficient manure to his crop and cannot carry on efficient interculture and also has to experience some difficulty in getting regular supply of water. All these deficiencies have the combined effect of considerably reducing the yield per acre of sugarcane for the grower and also effects the quality of cane. On account of the small size of his holding he cannot have proper rotation of crops and this does effect the yield of sugarcane which exhausts the soil.

The main difficulty of delivering cane at the factory is the bad and awful condition of roads as well as the condition of the bullocks which a grower possesses.

In our opinion some of the difficulties can be overcome by a closer contact between the factories and the cane growers. If the factories render assistance to the cane growers of their areas by supplying them sufficient and good seed as well as finance them for securing good manure and cheap interculture implements, the yield per acre for the grower will considerably increase and it will in turn bring down the cost of the cane for the factory. The commercial morality, however, of our cane cultivators being not very high, the factories fight shy in investing capital on this account in the fear that many of the cultivators will not repay these loans. Therefore in order to create confidence in the minds of the factory owners, in my opinion, such advances on being intimated by the factories should be recovered as arrears of land revenue by the Collector. It will solve the greatest obstacles in the way of cane development.

22. (*a*) The difficulties envisaged by the Tariff Board on the question of the compulsory acquisition or leasing of land for cultivation of cane by factories still exists with the same force as in 1930. So far as the factories in United Provinces are concerned we can see from our experience that there will be a very great agitation if any land round about factories is acquired by compulsion on a large scale. It will disturb the whole economic structure of the agricultural community round about the factories. Therefore in our opinion acquisition by force on a large scale is out of the question. We are, however, of opinion that every factory should have a small farm of 100 or 200 acres for breeding good varieties of cane for purposes of seed. This small farm can also enable the factories to utilise their effluent or dirty water by irrigating the land, and thus removing a nuisance which is often complained of. It will not create undue agitation if a small area say, 100 to 200 acres, is acquired even by compulsion.

(*b*) We are in favour of alloting special areas to different factories for their supply of sugarcane or in other words zone should be allocated to different factories. As a matter of fact it is becoming too late to introduce zones because factories have now been established without any regard being had to areas for supply of sugarcane. The absence of zoning has resulted in mal-distribution of factories with the result that there are too many factories in certain areas while there are none in others. Natural advantages and disadvantages of cane supply have to a certain extent led to natural zoning.

The United Provinces Government introduced a rule under the Sugarcane Rules Act last year that no factory could purchase within 5 miles of another factory through a purchasing agent. The idea was that within 5 miles of a factory no purchasing agent should act. This year it is proposed that within 5 miles of a factory or on area that may be fixed at the proposed conference at Nainital, no factory either through an agent or through its own employees should purchase cane. This will bring the system of zoning into force. The simplest way of working a zone can be by an adjustment of the sugarcane rules just as it is proposed in the United Provinces.

The natural advantage of zones will be that the factory concerned will feel more interested in developing the area allotted to it because it will be sure that the fruits of its efforts will come back to the factory and not taken away by others. They will feel inclined to advance money, seed and manure to the cultivators belonging to the zone.

When a zone has been established the factory concerned will naturally be required to fulfil its requirements first from the zone and go outside the zone when it cannot complete its requirements from within the zone. Great difficulty will arise if by chance the growers of a zone make a combination and try to demand a price which is uneconomical for the factory to pay. The factory of course will keep liberty of action in such cases. We think zone should be based on an estimate to supply at least 80 per cent. of requirements of the factory and some steps should be devised by which at least this quantity of cane is ensured to the factory from the zone. In order to make certain rights and liabilities obligatory on the factory owner and the grower, in our opinion some legislative enactment will be needed.

23. So far as the Shamli factory is concerned there is no factory round about it for a long distance; the nearest being Baraut which is at a distance of 25 miles. Therefore no special benefit is likely to accrue to this factory by fixing a zone for it. Even if a zone is not fixed for this factory we are prepared to advance money for seed, manure and other agricultural purposes

to the grower provided we are assured of recovering our advances as arrears of Land Revenue according to the suggestions made under question 21, and also the grower will not use improved cane in making *gur* or jaggery.

As regards the development of feeder roads we are prepared to keep gangs on important kutcha feeder roads to keep them in working order provided the District Board is prepared to co-operate and invest some money in building culverts and small bridges. The District Board should not grudge this small assistance specially when they get a tax of Rs. 2,500 a year from us. The industry, being in a critical stage at the present time, cannot be expected to invest large sums of money on metalling roads and laying tramways.

24. (*a*) This is a very wide question on which it is difficult to express a definite opinion specially when there is no reliable information or figures available about the annual consumption of white sugar in this country. There is also no data which may enable us to find out the tendency of consumption of white sugar, *i.e.*, whether it is on the rise and if so at what speed. All figures that are available at present are based more or less on conjecture. According to the figures that are available it is said that India has begun to produce all sugar that is demanded in this country. In my opinion the lower price of sugar has led to an increased consumption and the country can easily absorb 12¼ lakh tons of sugar. As soon as this quantity is produced and we expect it to be done in 1938-39, in my opinion the question of fixing quota for sugar manufacture by factories will have to be taken up.

(*b*) The Tariff Board of 1930 was opposed to licensing of factories on the ground of eliminating competition in the purchase of cane and relying on the good sense of capitalists that they will not put up factories when existing factories were working. In our opinion these considerations do not hold good now, as the country has reached a stage when it is producing almost all its requirements of sugar and the supply of sugar not having adjusted with its demand has led to a serious depression in the sugar prices and therefore unless control is exercised in setting up new factories and extensions of existing factories the result will be further depression which is sure to result in closing down of a number of factories and thus entail hardship to the cane grower and the small invester. The tendency is that factories are being erected in provinces which were hitherto backward or in native states where they obtain various kinds of concessions. Therefore the authority for licensing the factories should be an all-India body because it is not in the interest of the country to drive out the industry from one province to the other or from a province to an Indian State and thus cause hardship to one province with little or no advantage to the other.

25. The proportion of (*a*) gate cane and (*b*) rail cane is as follows:—

1933-34.	1934-35.	1935-36.	1936-37.
2 : 1	2 : 1	2 : 3	7 : 5

The variation from year to year has been due to increase in acreage and tonnage as well as the variation in the price of *gur* which is a governing factor in controlling the supply of sugarcane to the factories in the Western United Provinces.

26. Major portion of our cane supply is transported by carts and very little by lorries. This year the cane transported by bullock carts was 20 lakh maunds and the cane transported by lorries was about one lakh maunds. We would like to use more lorries but the only pucca roads cannot be used because of a damaged bridge.

The average weight of cane carried per cart is 20 maunds. In the present circumstances no improvement is likely to be made by the substitution of rubber tyred carts because the main difficulty in the case of rubber tyred carts is that the village tracks are not suitable for them.

This year we got on demonstration two Dunlop Rubber Tyred carts. They could easily carry 55 to 60 maunds of cane each, but there are two main difficulties in their adoption by the cultivator. One is the difficulty of finance and the other is that the village tract is not suitable for it.

The mileage of road in the vicinity of our factory is not adequate. Most of the villages are connected with the factory by village tracks which remain always in very bad condition and cause great strain on the bullocks of the cultivators. The condition of main roads and feeder roads which are all under the District Board is awful.

28. The distance varies according to the situation of fields say from 2 miles to 9 miles. The average time taken between cutting of cane and delivering at factory is 12 hours. There is not much deterioration during road transport.

29. Cane growers employ their own carts mostly and the average cost of transport is 1 pie per maund per mile, one pucca road and 3 pies per maund per mile on kutcha road.

30. No.

31. By issue of cards to the cane growers showing number of carts or maundage. Four to six hours may be taken as normal time for taking delivery of cane and releasing carts We have increased the number of weighbridges and are weighing the carts all the 24 hours instead of weighing during the day only.

32. Distance varies from 5 miles to 40 miles. Average time taken between cutting of cane and delivery at the factory is about 36 hours.

The railway administration tries its best to give facilities to us by running special trains, but the number of cane wagon is very inadequate. Only 87 trucks of a carrying capacity of 175 maunds of cane are provided for this factory which is far below our requirements. It does not enable us to get sufficient time for loading and unloading of cane from the trucks and also the number of cane specials is automatically checked. Inspite of repeated requests no attention has been paid.

As a last resort our company had to offer to the railway that it may be permitted to build about 30 trucks at its own expense provided a concession in railway freight and maintenance charges is allowed. Terms even for this could not be satisfactorily settled as the railway always takes a very narrow and mercenery view.

33. There is no fixed basis on which the railway freights are fixed on this line. They depend upon the sweet will of the agent. Instead of giving reduction in cane freights as has been done on other railways in view of the depression that has set in in the sugar industry, Shahdara Saharanpur Light Railway Company has progressively increased their railway freight in the following manner:—

The rates were on the basis of Rs. 90 per special for 20 wagons and Rs. 2 per wagon, *i.e.*, average of Rs. 4-8 per wagon upto 20 and over 20 wagons at Rs. 2 per wagon in the season 1933-34 and 1934-35. In the season of 1935-36 the rate was raised to Rs. 5 and Rs. 3 per wagon with a minimum of 36 wagons instead of 20. The average rate paid by us during the season 1935-36 was Rs. 4-14-5 per wagon. Since 1936-37 the rate has been raised to Rs. 6 and Rs. 3 per wagon and this raised our average to Rs. 4-15-7 per wagon.

Not being content with this the agent of the railway proposes from the next season to raise the rate to a flat rate of Rs. 5-3-4 per wagon. We suggest that there should be some authority to go into this question of railway freights of sugarcane and the railway administration should be checked from increasing railway freights from year to year.

The flat rate in our case has worked well and we have no preference for maundage rate per mile. We, however, wish that our rates of transport should be fixed at a reasonable figure and we do not see any reason why the rates that were fixed in 1935-36 should not be allowed to exist. We have moved the Managing Agents of the railway and may also have to go to the Railway Board but all this causes so much bother and trouble for a commercial concern.

34. No.

36. A tramway is very advantageous because it opens up the interior and brings the cane quickly and directly to the factory without any interference of ordinary traffic as on the railway with the result that the cane comes as fresh as the cart cane. The main difficulty in laying out a tramway is acquisition of land and of finance.

In our opinion the Government should undertake the construction of tramways for individual factories if the factories guarantee to pay the interest on the capital invested by the Government at the rate on which they borrow money from the Government of India. The Government will thus be secured of their interest and they will confer advantages both on the growers as well as factories without any burden on the public purse.

37. There is not much deterioration of cane in delivery by road as the cane is received and crushed in the factory within 24 hours of its cutting in the fields. Cane supplied by railway deteriorates in transit as incertain cases it takes 3 to 4 days for the cane to reach the factory. As for instance this year we imported cane from the East Indian Railway stations between Saharanpur and Luksar and we never got this cane before 4 days. The result was that while this cane would yield 9½ to 10 per cent. in April in factories on the East Indian Railway where it would reach quickly, the yield in this factory of the same cane fell by about 2 per cent. The deterioration in cane depends upon the time between its cutting in the fields and its crushing in the factory. Usually deterioration starts after 24 hours of its cutting and it becomes quick as time passes.

38. (*a*) & (*b*) All our gate cane is received direct from cane growers. We have no contractors at the gate. The proportion of our cane purchased direct from cane growers and through agents differed from year to year. The proportion was roughly as follows:—

	Direct.	Through agents.
1933-34	⅔rd	⅓rd
1934-35	⅔rd	⅓rd
1935-36	⅓rd	⅔rd
1936-37	$\frac{7}{12}$th	$\frac{5}{12}$th

39. We do not enter into any sort of contracts or arrangements with cane growers. There is no system of giving advances in cash or by means of seed or manure. We advanced some money for seed in the year 1934-35 to 2 or 3 selected tenants as a test but we are sorry we were not able to recover our advances and therefore we had to discontinue.

40. In cases where we do not purchase cane direct from growers we employ commission agents and the commission that we pay is usually 3 pies per maund for places situated on the Shahdara Saharanpur Light Railway and 7½ pies to 9 pies per maund for places situated on the East Indian Railway, and North-Western Railway. This higher commission is necessary on account of long time taken for cane to reach the factory from East Indian Railway station.

41. No.

42. We weigh all our cane on cart weighbridges. Payment is made at the time of demand after the delivery is complete.

43. The cane prices for this factory had been as follows:—

	Per maund	Average per maund.
	As. P. As. P.	As. P.
1933-34	4 6 to 7 0	5 10·4
1934-35	5 0 to 5 9	5 5
1935-36	5 0 to 7 0	6 1·9
1936-37	3 6 to 5 0	4 9·8

The price of cane varies at different periods of the season. Firstly the formula set up in Sugarcane Rules for the fixation of cane price leads to a change in the price of cane every fortnightly as it depends upon variation in the price of sugar. Secondly the price of cane for factories situated in the Western United Provinces also varies according to the variation in the price of gur because very good quality gur is manufactured in this part of the province and it very greatly influences the price of cane. Thirdly upto the present year there was deficiency in cane supply in this area and therefore prices also used to vary on account of the competition of factories amongst themselves.

44. Since 1934-35 the price of cane varies with the changes in the price of sugar according to the formula laid down in the Sugarcane Rules, *i.e.*, so long as the price of sugar is Rs. 8-8 per maund the price of cane shall be 5 annas. For every rise or fall in the price of sugar by 8 annas a rise or fall in the price of cane by one pice will be effected.

45. In this part of the province as stated under question 43 the price and supply of cane used to be influenced a good deal by the price of gur. The price of gur used to be high in the beginning of the season as well as towards the end of the season and the result was that at both times the price had to be raised by the factories.

On account of sudden expansion of the white sugar industry in the Western United Provinces cane cultivation could not keep pace with the sudden demand that arose for cane and this fact kept up prices both of cane and gur. As shown the average price of gur since 1934-35 was in the neighbourhood of 3 to 4 rupees with the result that the price of cane during these years never went down below 5 annas at any time.

Since the present season however, a change has taken place. The supply of cane is increasing with rapid speed and appears to be adjusting itself to the demand. Supply both of cane and gur increased with the result that the price of gur remained low throughout the season and so also the price of cane. To a certain extent the habit of supplying cane to the factories which the growers acquired during the last 4 years also had its effect on the increased supply of cane and consequent lower price of cane.

46. There are variation in price of gur in this area. As shown in question 18B the prices are very high in the beginning of the season and go lower and lower until they reach the ebb in January and February and then the price begins to rise towards the end of March and April. The main cause for these variation is mal-adjustment between supply and demand.

47. The price of cane paid by the factories in the Western United Provinces specially the Meerut Division has always been above the minimum price fixed under the Sugarcane Rules. The main causes are:—

(1) More demand of cane than its supply and consequent competition among the factories.

(2) High price of gur.

(3) The growers were not habituated to supply cane to the factory and therefore they stuck to their traditional industry of making gur.

(4) Since the season 1936-37, however, the price of cane in this area also remained almost the same as the minimum price. The reason was that there has been more expansion in sugarcane area and the growers are becoming habituated.

48. The basis on which the minimum prices are fixed under the Sugarcane Act 15 of 1934 is more or less the result of the largest measure of common agreement among the representatives of manufacturers, growers, and the Government. In the absence of any reliable figures of the cost of production of cane and in the absence of any fixed policy of the Government so far as excise on sugar is concerned there could not be and there cannot be any other basis but the present one, for the fixation of the minimum price of cane. It is very useful. In our opinion both for the grower and the industry if relation is maintained between the price of cane and price of sugar as both the parties lose or gain simultaneously. In my opinion in calculating the price of cane the excise duty should be treated as an item of expenditure and should be deducted from the price of sugar before taking it as the basis, *i.e.*, the price of sugar *minus* excise should be the basis for calculating price of cane.

49. It is in the interest of factories to pay bonus over and above the minimum rates for superior, early and late varieties but it is difficult for our tenants backward and uneducated as they are to take to such a system. There is going to be another difficulty and that is this that the size of an average holding is very small and it may be difficult for a grower to distribute his small area between 2 or 3 varieties of cane because if he will have small area under different varieties it might increase his cost.

Another difficulty that the growers experience is that the demand on his purse is not uniform. He has excess demand at some part of the season and therefore it becomes difficult for him to regulate his supplies.

Such system may be possible to work if co-operative sugarcane supply societies are established but it is a question of time.

50. The duration of the crushing season of this factory has been as follows:—

Years.	No. of crop days.
1933-34	116
1934-35	50 (factory stopped owing to frost and pyrilla, etc.)
1935-36	144
1936-37	181

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There are two main causes of the variation in the duration, one is the supply of cane and the other is the condition of the weather. If factories on this side can have the same duration as they had in the present year it can be considered satisfactory for economic working but if it becomes shorter then it becomes less economic to work.

51. It is quite possible to extend the crushing season by the introduction of early and late varieties, but the difficulty is how to bring it into effect and this question has already been dealt in 49.

52. The Imperial Council of Agricultural Research is spending some money on investigation of problems in connection with the cultivation of sugarcane and for the last two years the Agriculture and Co-operative departments are also doing some work with the money that they got out of the sugar excise. The work is very enormous and what is being done is too little to achieve any appreciable improvement in the cultivation of cane. If the sugar industry of this country is to keep pace with the sugar industry in other parts of the world and if it has to stand on its own legs after the end of the productive period in 1946 it is absolutely necessary that very great improvement should be brought about in the quality of cane as well as in its supply to the factory.

There are of course other problems connected with the sugar industry on which depend its existence and efficiency such as the utilization of by-products and the arrangement for marketing of sugar. To carry out all these objects the limited resources which the Imperial Council and Agriculture and Co-operative departments possess at present are quite inadequate. Therefore much larger funds should be found to meet these requirements. These funds in my opinion should be about 60 lakhs a year, at least half of which should be provided out of the excise duty on sugar and the other half should be found by the Industry.

Labour.

53. We employ both skilled and unskilled labour during the crushing and silent season as per statement enclosed *vide* Appendix A.

54 and 55. In our factory we had a foreign engineer and a chemist during the first season. The work of the engineer was satisfactory but the work of the chemist was highly unsatisfactory and their services had to be terminated. We have now replaced both the chemist and the engineer with Indians who are giving us entire satisfaction. No other labour is generally imported from abroad.

56. We have provided pucca quarters for the housing of our skilled labour. The unskilled labour stay at their own homes because they are drawn from the surrounding villages.

Power.

57. We have not been able to meet the whole of our requirement of fuel from bagasse. Our consumption of fuel has been as follows:—

	Rs.	A.	P.
1933-34	48,500	4	6
1934-35	17,832	3	3
1935-36	38,455	8	6
1936-37	9,863	0	6

By-products.

58. The by-products of our factory are:—

(1) Bagasse.

(2) Molasses.

(3) Filter mud.

59. The outturn and price of molasses of the last four years has been as follows:—

	Outturn. Mds.	Price. Rs.	
1933-34	52,966	1,173	
1934-35	39,170	3,467	
1935-36	97,544	5,444	sold only 28,350 mds.
1936-37	132,800	4,295	sold only 37,564 mds.

The variation in the outturn of the molasses depends upon the quality of cane, *i.e.*, purity and Brix. If the purity and Brix is lower then the quantity of molasses will proportionately increase. During the past years on account of lower Brix and purity the percentage of molasses on cane in this factory has been higher.

The variation in the price of molasses depends to a certain extent on its supply and to a greater extent on the price of gur. During the year

1933-34 we had almost to throw away our molasses. In the year 1934-35 and partly in 1935-36 on account of steady price of gur we were able to dispose off the molasses. This year we are experiencing very great difficulty in the disposal of molasses on account of the increased outturn in the factories and the lower price of gur.

The price of molasses is also effected appreciably by the production of molasses in Khandsari which get better prices for their molasses and are able to sell in the interior.

60. The market for molasses of this factory is very limited. Some are sold locally for tobacco, etc., and we transport some of our molasses to Saharanpur and Shahdara by rail.

The railway facilities are entirely inadequate and defective. This railway does not care at all for the convenience and benefits of the factory but looks to petty gains and benefits of its own. This railway upon repeated requests constructed two tank wagons which were used in carrying molasses upto Saharanpur on the North and upto Shahdara on the South, but on one pretext or the other the railway company withdrew these tanks from traffic causing incalculable harm to the factory and leaving us to transport molasses by means of drums which method is more expensive and troublesome.

Just as in the case of cane wagons we offered the railway that we might be permitted to build at our own cost four detachable molasses tanks so that during the off-season they may be fixed up in cane trucks for the transport of molasses. In the beginning we were permitted to build them but on afterthought for reasons known to the railway administration itself this permission was withdrawn.

We are experiencing great difficulties in dealing with the railway administration of the Saharanpur Shahdara Light Railway on the question of supply of tank wagons for molasses and we do not know how to overcome this trouble.

The railway freight from Shamli to Saharanpur and Shahdara is a flat rate of Rs. 10 per four-wheeled wagon which can hardly carry more than 175 maunds.

These rates are also higher for Saharanpur and Shahdara as compared to rates of these stations from North-Western Railway factories. We repeatedly applied for concessions to the railway but have not been successful.

61. This year we are afraid that on account of inadequate railway facilities and lower prices of gur and abundant supply of Khandsari molasses a large quantity of molasses will be left in our hands and it is a problem for us how to get rid of them. It is possible we might have to throw away a considerable quantity of them.

As the transport of molasses from the factories situated on the narrow guage will always put unsurmountable difficulties partly on account of insufficient supply of carrying stock and partly on account of the transhipment difficulties, we intend to apply to the United Provinces Government to give us permission to set up a distillery, for making methylated spirit and power alcohol.

The question of making power alcohol from molasses is very important for the sugar industry since molasses have lost practically all their value for other purposes. We took up this question very seriously in the All-India Sugar Committee but no satisfactory assurance is coming forth from the Government. We feel that a stage has now arrived that permission for manufacturing power alcohol must be given to us. We shall be able to manufacture it on commercial scale and compete with petrol in up-country markets, at the same time paying the same excise duty as is levied on petrol, provided certain facilities are given by the State such as compulsory mixing with petrol, etc.

Some chemicals can also be manufactured from molasses such as Ecetone, etc.

Molasses can also be used as fertilizer but it proves rather expensive on account of the difficulties in transporting it to the fields and also on account of large quantities in which it has to be utilized in manuring.

Molasses can also be used to a limited extent as cattle food.

Experiments have also been made to use molasses as a road surfacing material but it has not yet been sufficiently tried.

The difficulty of molasses can only be solved if permission for manufacturing power alcohol is given because the other uses are very limited in character and cannot meet the situation. The Tariff Board therefore should take up this question very seriously and make definite recommendations so that permission may be granted for manufacturing power alcohol.

62. We did not have any surplus bagasse upto this time. In our opinion the chief use of the surplus bagasse is the manufacture of card board just as Sellotax, etc.

The Imperial Council of Agricultural Research has also given a grant to the Forest Research Institute at Dehra Dun to investigate the use of bagasse as a paper pulp making material.

Bagasse can also be used to a limited extent as cattle food in mixture with molasses.

63. The filter mud is a good manure, but it requires experiments. If it can be proved that it is useful for crops then propaganda should be carried on among the agriculturists to enable them to take to the use of filter mud as a manure.

Storage and Transportation of Sugar.

64. The stocks of sugar at the beginning and end of the crushing season since the starting of the factory are as follows:—

Year.	Stock at the beginning of the season.	Stock at the end of the crushing season.
1933-34	No Stock	No Stock
1934-35	,,	,,
1935-36	,,	43,725 maunds.
1936-37	,,	101,397 ,,

65. We have pucca godowns covered with tin sheets and cement floors. The number of godowns is as follows with the capacity noted against each:—

No. of godown.	No. of bags.
No. 1	25,000 bags of 2½ maunds.
No. 2	10,000 bags of 2½ maunds.

As we apprehend that in future we might have to keep larger stocks at a time we contemplate having a 3rd godown of the capacity of about 20,000 bags.

Our existing godowns were built in the first year and we have not had any additions during the last four years.

66. The main deterioration of sugar in storage is due to moisture which the sugar catches from the ground. Although the floors are all cemented and we use wooden stands about one foot in height for stacking the bags on them, yet during the rainy season the lowest bag catches moisture.

We are told that to a certain extent sugar also deteriorates on account of sudden and quick changes in weather and temperature.

The quality of sugar does effect the degree of the damage done by the moisture. The lower the polarization of sugar the greater the chance of damage from moisture. Inferior sugars catch moisture and lose colour more quickly than the first white sugar.

67. We do not re-condition the damaged sugar as this proves expensive. We sell the damaged sugar outright at reduced rates.

68. The keeping quality of sugar is increasing progressively. The factories are taking to manufacture only one class of sugar of high polarization and are giving up the production of inferior sugars. This in itself leads to greater keeping quality.

The factories are also improving their godowns so that chances of damage from moisture may be reduced.

Some factories are taking to carbonitation process which improves the keeping quality of sugar.

69. No such question has arisen in this factory. There can, however, be two causes of damage to sugar in transit:—

(1) By pilfering.

(2) By leakage of wagons during the rains

70. So far as the despatch of sugar is concerned we have not experienced much difficulty in obtaining wagons.

71. We have no suggestions to make.

72. We give below a statement showing the prices at which the products of this factory has been sold in the up-country market. We have not sold any sugar at the port:—

	December.	February.	April.
1933-34 . .	Rs. 9-4	Rs. 9	No stock.
1934-35 . .	Rs. 8-12	No stock.	No stock.
1935-36 . .	Rs. 9-10 to Rs. 8-12 per maund.	Rs. 8-8 to Rs. 8-5 per maund.	Rs. 8-8
1936-37 . .	Rs. 7-3 to Rs. 6-12 per maund.	Rs. 6-12	Rs. 6-8 to Rs. 5-12 per maund.

The statement of freight rates to the main markets we supply is attached *vide* Appendix B.

Capital account and over-head charges.

73. The Balance Sheets for the years ending 30th September, 1934-35-36 are enclosed herewith, *vide* Appendix C.

74. The statement showing the amount of depreciation written off for the years is enclosed herewith, *vide* Appendix D.

The rates for depreciation are according to the rates allowed by Income-tax Department except the following:—

Name of account.	Our rates charged.	Income-tax allowed.
	Per cent.	Per cent.
Library	10	*Nil.*
Laboratory and Hospital equipments .	6¼	*Nil.*
Tube-well	10	5
Private Railway siding	6¼	5

75. The company did not make sufficient profits during the first 3 years of its working and therefore it has not been possible to set aside anything towards the Reserve Fund. As a matter of fact during the year 1934-35 it suffered a loss of Rs. 2,11,387-12-2 which is being carried over and has still to be written off.

76. We have distributed the following dividends:—

In the year—

1935-36:—7½ per cent.

1936-37:—An *ad-interim* dividend of 7½ per cent.

77. Our working capital is provided by the Managing Agents themselves and they charge the same rates from the company at which they borrow from the banks which is usually 4 per cent.

78. The annual Head-office expenses are as under:—

		Managing Agency Commission.
	Rs. A. P.	Rs. A. P.
1933-34	13,696 4 10	16,940 4 3
1934-35	3,663 12 0	*Nil.*
1935-36	2,392 3 9	23,423 10 6

The method of charging the Managing Agency Commission is as follows:—

A commission of 10 per cent. per annum (subject to being increased in General Meeting on the annual net profits of the said Company after making all proper and necessary allowances and deductions from revenue for working expenses chargeable against profits:

Provided, however, that in calculating the net profits of the said Company for the purposes of this clause no deductions shall be made from profits for income-tax, super-tax or excess profits-tax or any other assessment payable to government or for depreciation and reserve funds or for expenditure on capital account.

Note—Excise duty is of course treated as an item of expenditure. The Managing Agents do not charge any fixed salary or any buying or selling commission on any commodity including sugar.

79. For the newly established factories I think during the period of protection a fair return should be 10 per cent. on Block account because when these factories were established the rates of interests at which money could be had were as high as 7 to 9 per cent. and some factories floated debentures for fixed periods at higher rates of interests. A large number of share-holders also invested money in sugar industry after borrowing at high rates of interest in the hope that they will get handsome dividends and would be able to repay their loans, but for the last four or five years their hopes have not been fulfilled. In order to save these small investers and to inspire confidence in them for investing money in future in industries it is necessary that before the protective period ends these people should be in a position to earn at least their capital in the form of dividends.

It is also necessary for the industry to stand on its own legs after the expiry of the protective period. They should build good reserves. If a provision is made for a 10 per cent. on block, part of it can be paid as dividends and part may be kept as reserve. If necessary a compulsory provision may be made that so much percentage of profits will have to be kept as reserve.

80. The forms duly completed are enclosed herewith.

81. It is very difficult to give separately in exact figures the reduction in work cost that has been brought about under the 4 heads mentioned in question 81 from year to year, but some idea may be formed from the general remarks that we make under each head as below:—

(1) Extensions to the plant were made only after the season 1935-36 and its effect has been felt during this season with the result that the crushing is increased from 2,500,000 to 3,700,000. This will bring about a proportionate reduction in the overhead charges, interest charges, establishment charges and depreciation per maund of sugar.

(2) We over-hauled the bagasse furnaces of all our boilers last season and this has resulted in considerable economy of fuel. During 1935-36 we burnt coal of Rs. 38,455-8-6 while in 1936-37 we burnt fuel of Rs. 9,863-0-6 only.

(3) and (4) The Managing Agents' representatives who used to work as managers in the factory used to be paid 5 per cent. on profits as their personal remuneration over and above that paid to the Managing Agents. Since the commencement of the present season this has been discontinued and the managers will be paid by the Managing Agents out of their own commission.

82. In this factory with the additions that are proposed to be made this year the works cost will be further reduced from the commencement of the next year by at least 20 per cent. on account of four reasons:—

(1) The crushing will be more by at least 20 per cent.

(2) The efficiency and recovery of sugar which is expected to be better on account of addition of the 5th mill and extra quadruple and pan.

(3) On account of better quality of sugar which will enable the company to fetch a little more price for its product.

(4) By the addition of a modern type of Boiler the consumption of fuel is expected to be further reduced.

Marketing.

83. Our principal market centres are:—

Shamli, Delhi, Panipat, Karnal, Amritsar, Jullundar, Ferozepur, Lahore, Rawalpindi, Peshwar and areas round about these centres.

84. For this factory we have appointed agents for the sale of its products. There are two kinds of agents. Those who do business in Shamli because Shamli itself is a big mandi. We treat these agents as dealers, *i.e.*, give them delivery against cash and they sell it at their own rates and at their own risk to their dealers. We allow these merchants selling commission at the following rates:—

8 annas per cent. upto a sale of 5,000 bags in the season.

12 annas per cent. if the sales exceed 5,000 bags in the season.

We have agents for areas outside Shamli. They sell sugar to the dealers on behalf of the company but if any person whom sugar is sold through an agent does not take delivery of sugar or backs out from the contract then the agent through whom the sugar has been sold is held responsible. These agents deposit securities with the company for the due fulfilment of their agency terms. They get commission at the rate of 12 annas per hundred rupees. These agents sell sugar to the dealers only at the rates fixed by the company and cannot make any profit.

(*b*) So far as we are aware the dealers give sugar to the retailers on credit system and for this accommodation they charge a little higher price and interest.

85. Our sugar contract form is enclosed *vide* Appendix E and we find it quite suitable. In our opinion these contracts in future should be based on Indian Sugar Standards prepared by the Director of the Imperial Institute of Sugar Technology. This will prevent lot of disputes that now arise on account of quality.

86. The wholesale and retail prices of sugar in the areas covered by distributing centres with which we are acquainted are given in Appendix E.

(Note.—These figures are being collected and will be sent soon.)

87 and 88. There is some fluctuation between wholesale and retail prices. The reason is that the factories do not maintain their own retail depots and then there are 3 or 4 persons between the factory and the retailer and charges of all fall on the sugar that is sold by the retailer. The dealers have ordinary shops and godowns for storing sugar and the sugar does catch moisture during this storage.

89, 90 and 91. Some of the Indian Sugars which are of lower polarization do deteriorate more quickly than Java, but some of the standard Indian sugars are as good as Java both in quality as well as in keeping properties. The Director of Sugar Research Institute, Cawnpore, has prepared a detailed survey on quality of Indian sugars and he is of opinion that the quality of Indian sugars is making improvement very rapidly and a number of them compared very favourably with Java. We notice a marked tendency among all the sugar manufacturers towards the improvement of quality both as regards colour and grain. We think if no crisis arose in the industry and it is permitted to establish itself on sound lines during the remaining period of protection, in the course of the next 2 or 3 years, at least 80 per cent. sugar produced in this country will be as good as Java.

Some European and European-managed hotels have liking for Java sugar, but I think that will also be replaced by Indian sugar because as stated above some of this sugar is even now equal to Java.

92. The manufacturers generally carry stocks upto the end of July as they try to clear their goods before the rainy season, but during the present season in my opinion more than half the factories will have to carry stocks till about the end of October as demand for sugar is becoming graduated and dealers do not want to take unnecessary risk.

Last year the dealers purchased large quantities of sugar and they suffered losses on account of heavy fall in prices of sugar in August and September.

The stocks of manufacturers are usually financed by bankers. We have arrangement with our bankers under which they charge us 4 per cent. interest and salary of the godown keeper and we have to maintain a margin of 25 per cent. on the market value of goods *minus* the excise duty.

93. A marketing survey of the sugar industry would be very useful as it will give us some idea for the annual consumption of sugar in this country and also its trend in the near future. The information obtained by this survey will also enable us to decide if any restriction has to be placed on the production of white sugar by the factories, *i.e.*, if any quota system has to be introduced so far as the production of sugar is concerned.

This survey will also be useful and necessary in case a Central All-India Selling Organization is to be established.

This question was discussed in detail at the recent meeting of the Indian Sugar Committee at Simla and it was decided that the Imperial Council should undertake this work and they made a grant for this purpose and the Marketing Officer attached to the Imperial Council has undertaken to start this work. In my opinion Imperial Council may not be able to spare all the necessary funds for this purpose and therefore it may take a long time to complete this survey if it is left entirely to the resources of the Imperial Council. In my opinion the Government should contribute a special grant for this purpose so that this work may be completed without delay.

94. In our opinion a Central All-India Selling Organization is an urgent necessity for the sugar industry under the present circumstances. We believe a large number of difficulties in the sugar industry at present are due to an uneconomic level of prices prevailing for sugar, though at times these difficulties are enhanced by untimely imposition of increase in excise duty and unfair fixation of price of raw materials. On account of disorganization

in sales and cut-throat competition of the factories sugar is being sold at rates which could never be thought of. If the present rates of sugar continue I am certain all the factories which have a capacity of less than 800 tons a day will have to close their doors and will not be able to work next season unless the price of cane also drops to an uneconomic level. It is also possible that even bigger factories may have to face a very serious crisis.

It can even be argued that in the case of a luxury article like sugar it does not matter even if the consumer does pay a slightly higher price in order to develope the resources of the country and enable the cultivator to earn a decent living.

As a matter of fact the consumer is now getting almost the whole of the advantage or even more than what he could expect out of protection. There is no reason that when he could afford to pay Rs. 12 a maund in 1932 or Rs. 10 a maund in 1934-35 he should now get all his requirements at about half the price, thus depriving the manufacturer as well as the grower of all the wenefits. It is true the consumer is not responsible for this state of affairs but it is the duty of the State to end this state of affairs as soon as possible. This can only be done if a Central Sale Organization representative of the industry, the Government, the Trade and the Grower is set up so that they may organize proper sales and sell sugar at an economic and reasonable price. I am not in favour of setting up a sale organization which may be controlled by only one section of the industry as the aim of the sales organization will be defeated if prices are raised to a higher level than what is exactly necessary and this likely to arise if the sales organization is subject to sectional control.

95, 96 and 97. We are in favour of the standardization of Indian sugars and the work in this connection that is being carried on by the Director of Imperial Research Institute, Cawnpore, is very appreciable and we think standardization on the basis that is being carried out by Mr. Srivastava is satisfactory. We had a meeting of the Bureau of Sugar Standards under the Director of Imperial Institute of Sugar Technology in April and we made lot of recommendations in order to popularise sugar standards with the industry and trade, such as reducing the price of the standard sets, utilizing medium of the Sugar Technologist's Association in making standards popular with the Chemists so that they may use them in manufacturing their sugar.

Actual business on the basis of the sugar standards prescribed by the Directors has been done by a very few factories, but the tendency to use them for sale as well as for grading is increasing.

98. The establishment of the futures or terminal market is receiving the attention of the Imperial Council of Agricultural Research and the Director of Imperial Institute of Sugar Technology and the Marketing Officer of the Imperial Council are carrying on investigations in this matter and are negotiating with the merchants and the industry for the establishment of such a market.

In my opinion when the sugar industry has so much advanced, the establishment of futures market or terminal market is essential to keep a healthy tone in the market of sugar.

99. As stated before there are no reliable figures about the consumption of sugar in India but according to the general belief it may be taken as 11,00,000 tons. The lower price of sugar tends to increase the consumption of sugar as India is already much underfed so far as the consumption of sugar is concerned. The Director of Imperial Institute of Sugar Technology says that the *per capita* consumption of sugar in 1931-32 was 6·1 lbs. sugar and 17·6 lbs. gur making a total of 23·7 lbs. and in 1936-37 the figures were 6·4 lbs. sugar and 26·6 gur making a total of 33 lbs.

100. It is very difficult to say to what extent factory sugar is replacing gur as both sugar and gur industries are progressing side by side. In the

sweetmeat trade generally on our side white sugar has practically re
gur completely.

Export of Sugar (in tons).

		By sea.	By land.
104.	1930-31	493	40,126
	1931-32	226	28,885
	1932-33	437	27,729
	1933-34	425	33,110
	1934-35	363	34,034
	1935-36	389	25,836
	1936-37	521	23,381 (for ten month January

At present there is no export market for Indian sugar but the i
maintains that if reasonable facilities are provided by the Governme
if no crisis takes place in the Industry and it maintains its prese
of progress, there is no reason why sugar should not be exporte
India. During the last 5 years the price of Indian sugar has com
from Rs. 12 to Rs. 4-8 we are certain that if every thing goes
the price will soon drop by a rupee or so.

This question was also discussed at length at the last meeting
Sugar Committee and during the course of discussion Mr. R. C. Sri
said :—

> " that for export purposes white sugar was not needed and tl
> raw sugar was needed in the European markets. In all markets
> of duty for direct importation of white sugar was very much
> It would be easier to export raw sugar from India, for the pe
> recovery was greater in raw sugar than in white sugar and it a
> cally reduced the cost of production. On a rough calculation i
> be assumed that 9½ per cent. of white sugar recovery was equiv
> 10 per cent. of raw sugar recovery. Taking 10 per cent. to
> recovery and the cost of cane at 3 annas per maund delivere
> factory the cost of cane per maund of sugar would come to I
> The manufacturing cost might be assumed as Re. 1 per ma
> raw sugar, as the process of manufacturing raw sugar was ve
> simpler than the manufacture of white sugar. The total co
> come to Rs. 2-14 per maund of raw sugar which was equiv
> 4*s*. 3*d*. per maund or 5*s*. 8*d*. per cwt. The current price on the
> market was 6*s*. 1½*d*. per cwt. whereas the Indian price wa
> factory. There was a margin of 5½*d*. which would have to cove
> and steam freights. He was therefore of opinion that under
> condition there was not sufficient margin for exporting sugar
> interior, but it might be possible for factories situated clos
> ports or which has special transport facilities. He said that
> to the figures the possibility of India exporting sugar in the ne
> should not be absolutely ruled out ".

part of our sugar we might be able to maintain prices in India at an economic level. This possibility now seems to have been ruled out in view of the London agreement.

If what is said to have been decided in London is finally ratified by the India Government the Indian industry will have to depend only on its own market and measures will have to be considered to keep it in order by means of other than exporting the surplus.

106. The molasses are sold through agents to petty dealers. From some factories, some foreign companies purchase molasses for export. For the sales that are made through agents a commission is paid at the rate of ½ pice per maund. The purchasers who purchase molasses take f.o.r. delivery at the factory and carry them in tank wagons or in drums.

107. Export of molasses from India—

——	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Aden and Dependencies.	13	12	11	13	..	389	10
United Kingdom .	..	..	7	179	153	..	13,622
Ceylon . . .	390	658	707	890	890	925	923
Union of South Africa	13	12	9	14	..	..	9,500
Zanzibar and Pemba	14	15	17	17	..	..	..
Other Possessions .	13	21	13	19	..	..	..
Other Countries .	..	..	..	..	110	101	140
Total .	443	718	764	1,141	1,153	1,415	24,195

I do not think if there is much possibility for the export of molasses. When we discussed this question in the Sugar Committee in 1936 great hopes were extended to us on behalf of the export company that it will take the whole of the molasses of the country and it was one of the grounds which at that time induced the Government to give up the question of considering the feasibility of permitting manufacture of power alcohol but this company, as will be clear from the above statement has been able to take away only about 24,000 tons which is nothing as compared to the production which is about ½ million tons.

Claim for protection.

108. The duties imposed under the Sugar Protection Act of 1932 have been quite effective except for a small period in 1934 when Java began to bring sugar into India at unremunerative prices.

109. The question of quantum of protective duty is now more academical than real because the price of Indian sugar has lost all relations with the prices of imported sugars and the Indian sugar is selling at a much lower price than the price of the imported sugar.

In the interest of the cane growers, the manufacturers and the Government which now realises about 3 crores and 75 lakhs of revenue from excise it is absolutely necessary that the protective duty should remain at a level which should prevent imports of foreign sugar into this country. What this rate of duty should be it is very difficult to say because duty depends on the price at which the Indian sugar should sell. The present prices of Indian sugar cannot be a correct criterion in arriving at a right conclusion about this rate of duty because the present price is uneconomic and if it does not go up a large number of factories will close down, causing in turn great hardships to the cane producers, small investers, and loss of revenue to the Government.

Before the exact rate of duty can be suggested for the remaining period of protection it is necessary that we should be able to decide what should be the size of an economic unit in India and also what should be the minimum price of cane that should be paid to the grower because on the decision on these questions will depend the cost of production of sugar in India. This will enable the Board to fix a reasonable selling price for the Indian sugar. In my opinion the import duty should be fixed at the rate of Indian price *minus* price of Java sugar *plus* rupee one per maund for difference of quality, etc. In order to keep contingency in view it is necessary to add Rupee one to the difference between the fair selling price of Indian sugar and imported price of Java sugar.

For determining the rate of protective duty we shall always have to take the sale price of Central United Provinces say from Bareilly in a distant port like Madras. On the present rate the sale price of Bareilly sugar will be roughly Rs. 4-12 *plus* Rs. 1-8 excise, *plus* Rs. 1-4 railway freight making a total of Rs. 7-8. Out of this we should deduct the Java cost price of Rs. 2-8 per maund. It gives a difference of Rs. 5 per maund and to these Rs. 5 may be added 8 annas for difference of quality and 8 annas for contingency, *i.e.*, making a total protective duty of Rs. 6 per maund or in other words Rs. 8 per cwt. In short the rate of protective duty should be kept fairly high. It will not do any harm to the consumer as the price of Indian sugar has now been controlled by internal competition. It will give reasonable chance to industry to expand and enable him to pay reasonable price to the grower for cane because if the grower cannot dispose off his cane at a paying price a serious agrarian situation might arise specially in the United Provinces and Bihar where payment of land revenue and irrigation dues mainly depend upon sugarcane. It will also not injure the finances of the Government of India as on whatever little imports we have of foreign sugar a higher duty will give them higher income.

110. This question is rather more important from the point of view of the industry than the exact rate of duty for the remaining period. I think State assistance is needed for the industry in directions.

(i) The State should provide a large sum of money, say about 50 lakhs, preferably a fix percentage of the sugar excise at the rate of 2 annas in the rupee for the development of sugarcane and on research of other Technical subjects and on allied matters. The Government now gives about 7 lakhs a year to the provinces out of the excise and gives a grant of about 5 lakhs to the Imperial Council in addition to maintaining the Sugar Research Institute of Cawnpore and the cane breeding station at Coimbatore and Karnal, etc. This assistance is nothing as compared to the magnitude of the problems and the rapidity with which improvement in these directions is needed. On improvement in cane depends the efficiency of the industry and ultimately its existence because unless the quality of cane becomes the same as in Java or other foreign countries it will be difficult for the sugar industry in India to stand on its own legs at the end of the protective period. While progress has been made during the last six years on the manufacturing side of the industry both in regard to efficiency in terms of sugar percentage and also in regard to manufacturing expenses similar progress had not been made in regard to the cost of cultivation of cane and quality of cane. Some people thought that the cost of cultivation of cane to-day was very near that of 1931-32 whereas during the same period the manufacturing cost had come down by 40 per cent.

(ii) The State should give assistance to the industry in the proper utilization of its by-products specially the molasses. When the first Tariff Board reported they calculated the price of 10 annas 8 pies per maund for molasses at the beginning of the protective period and 6 annas 9 pies at the end of the protective period, but on account of phenomenal development in the sugar industry the molasses practically lost all their value from the 2nd or 3rd year of the protection and now it is becoming a problem with some of the factories how to dispose off the molasses. The State should seriously consider the question of giving permission to the selected factories to manufacture power alcohol from molasses. In my opinion it will still be better if the State sets up one or two State-owned and State-controlled central distilleries in each area of sugar production and purchase all the molasses of the factories every year. I have no doubt that the industry would like to take up this work itself, but it may be in the larger interest of the country and administrative difficulty on account of which the Government is afraid in giving permission to private concerns may be solved.

(iii) The State should help the industry in setting up an organization which should organize the sales in an efficient and economic manner. It might be said that it is for the industry itself to organize such a body but sight should not be lost of a fact that if for any reason the industry is not able to do it themselves how much harm would be caused to the interest of the country, if a number of factories close down on account of crisis in sugar prices and if the price of cane goes down to an uneconomic level. As, welfare of a large number of cane growers is involved, it is necessary that the price of sugar should not go below a certain level in order to enable the factories to pay a reasonable and economic price to the growers because the price of sugar and cane are bound to rise or fall together.

(iv) The intense traffic of sugarcane carriage has caused a tremendous strain on the existing roads and in order to save the bullocks of the growers it is necessary not only to maintain the existing roads in good order but also to lay and metal certain length of mileage round about each factory. It is therefore the duty of the Central Government to give the subsidy out of excise to the Provincial Government for the development of roads in the sugarcane areas.

III. There is no effect of import duty on molasses and as far as I think it has not effected adversely any industry in India because the molasses in India can be had for nothing.

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APPENDIX A.

Detailed Statement showing staff expenses—Upper Doab Sugar Mills, Ltd.,—for one month of the working season.

		Rs. A. P.	Rs. A. P.	Rs. A. P.
CANE.				
1. *Executive Staff—*				
(1) Controller's allowance .		200 0 0		
(2) Cane Manager . .		85 0 0		
(3) Cane Supervisor . .		40 0 0	325 0 0	
Establishment H—				
1. Clerks . . .	11	365 0 0		
Cashiers . . .	3			
Payment Incharge .	1			
Peons . . .	3	24 0 0		
Sweepers . . .	4	32 0 0		
Waterman . .	1	8 0 0	429 0 0	

APPENDIX A—*contd.*

Staff Expenses for one month of the working season—contd.

		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Weigh Bridges—										
1. Maintenance Mistry	1	55	0	0						
Fitter	1	20	0	0						
					75	0	0			
Operation—										
Weigh Clerks and Checkers	26	573	0	0						
Chawkidars	26	208	0	0						
Jamadars	2	25	0	0						
					806	0	0			
Loading cane carrier	.	..			1,050	0	0			
					2,685	0	0			
								2,685	0	0
Milling—										
1. Fitters	3	156	0	0						
2. Fitters helpers	6	73	0	0						
3. Drivers	18	412	8	0						
4. Oilmen	15	169	0	0						
5. Pumpmen	6	76	0	0						
6. Coolies	39	313	8	0						
7. Store Issue Staff	6	119	0	0						
					1,320	0	0			
Steam—										
1. Boiler Attendant	3	151	0	0						
2. Firemen	15	425	0	0						
3. Coolies	57	515	0	0						
					1,091	0	0			
Clarification—										
1. Fitters	6	241	0	0						
2. Fitter helpers	6	73	0	0						
3. Drivers	18	383	8	0						
4. Oilmen	9	96	0	0						
5. Pumpmen	24	191	0	0						
6. Khalasies	12	252	8	0						
7. Mochi	3	60	0	0						
8. Liming mate	3	51	0	0						
9. Liming coolies	12	112	0	0						
10. Sulphur mate	3	82	0	0						
11. Asstt. Sulphur mate	3	39	0	0						
12. Sulphur coolies	3	31	0	0						
13. Furnace man	3	46	0	0						
14. Eliminator mate	3	55	0	0						
15. Eliminator coolies	3	33	0	0						
16. 1st settling mate	3	62	0	0						
17. 1st settling coolies	12	127	0	0						
18. 1st Blow up coolies	6	60	8	0						
19. Storage tank coolies	3	29	0	0						
20. 2nd settling mate	3	58	0	0						
21. Coolies	9	88	0	0						
22. Maceration coolies	3	32	0	0						
					2,202	8	0			

APPENDIX A—*contd.*

Staff Expenses for one month of the working season—contd.

		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Filteration—										
1. Press mate	3	61	0	0						
2. Asstt. Press mate	3	41	0	0						
3. Press coolies	54	552	8	0						
4. Tailors	3	56	0	0						
5. 2nd Blow up coolies	6	55	8	0						
					766	0	0			
Evaporation—										
1. Juice Heater attendants	3	61	0	0						
2. Juice Scale attendants		38	0	0						
3. Quad. Man	3	97	0	0						
4. Pan coolies	9	106	0	0						
5. Panmen	8	737	0	0						
6. Juice Supervisors	3	154	0	0						
					1,171	0	0			
Curing and Finishing—										
1. Centrifugal mates	3	75	0	0						
2. Assistant centrifugal mates	3	51	0	0						
3. Operators	66	785	8	0						
4. Elevator coolies	8	71	0	0						
5. Dryer house coolies	6	78	8	0						
6. Crystallizer coolies	3	59	8	0						
7. Sugar coolies	36	334	8	0						
8. Sugar mates	2	26	0	0						
9. Dryer house and sugar godown staff		115	0	0						
					1,586	0	0			
Bagging—										
1. (The work of filling, sewing and stacking of sugar bags is done on contract basis come to		375	0	0						
Light and Power Plant		231	0	0						
Water service		93	0	0						
					324	0	0	8,835	8	0
Overhead charges—										
1. Laboratory—										
(*a*) Incharge	3	110	0	0						
(*b*) Assistant Chemists	3	175	0	0						
(*c*) Lab. boys	3	41	0	0						
(*d*) Sample boys	3	32	0	0						
					358	0	0			
2. Factory guards and watchman—										
(1) Office and quarter chawkidars	4	41	0	0						
(2) Sugar Godown C	2	20	0	0						
(3) Factory Chawkidar	14	114	0	0						
					175	0	0			

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APPENDIX A—*contd.*

Staff Expenses for one month of the working season—contd.

		Rs. A. P.	Rs. A. P.	Rs. A. P.
Overhead charges—contd.				
3. Cartage, freight and Handling charges.		(No regular staff is maintained work done through casual labour and expenses are debited to the respective head concerned.)		
4. Sugar delivery charges .		125 0 0	Work done on contract system Rs. 175-0-0.	
5. Molasses delivery charges—				
Chawkidar . .	1	10 0 0	10 0 0	
6. Sanitation and Cleaning compound—				
Sweepers . .	5	41 0 0	41 0 0	
7. Press mud and Ash removing—				
1. Mud shifting coolies.	15	142 0 0		
2. Mate . . .	1	15 0 0		
			157 0 0	Boiler cleaning is done on contract system. No regular staff is maintained. Expenses Rs. 214-0-0 approx.
Boiler cleaning . . .		214 0 0	214 0 0	1,080 0 0
Establishment H. charges—				
1. *Executive Staff*—				
(*a*) Manager (Allowance)		200 0 0		
(*b*) Chief Chemist . .		700 0 0		
(*c*) Chief Engineer . .		500 0 0		
			1,400 0 0	
2. *Clerical staff*—				
(*a*) Clerks	9	257 0 0		
(*b*) Cashiers . . .	2	63 0 0		
			320 0 0	
3. *Assistant Engineers and Factory Supervisors*—				
(*a*) Engineers . .	3	280 0 0		
(*b*) Foremen .	3	210 0 0		
(*c*) Time Keeper and Supervisor . .	4	118 0 0		
(*d*) Building supervisor . .	1	25 0 0		
(*e*) Office supervisors	3	210 0 0		
			843 0 0	
4. *Staff servants and other allowances*—				
(*a*) Manager's peons	2	28 0 0		
(*b*) Garden staff .	3	30 0 0		
(*c*) C. C. servants . .		25 0 0		
(*d*) C. E. servants . .		10 0 0		
			93 0 0	

APPENDIX A—*contd.*

Staff Expenses for one month of the working season—concld.

		Rs. A. P.	Rs. A. P.	Rs. A. P.
5. Up keep of factory carts	.	*Nil*	No carts maintained.	2,693 0 0
6. Office peons	4	37 0 0	37 0 0	
7. Workshop—				
1. Mechanics	3	142 0 0	142 0 0	
2. Other skilled labour—				
(*a*) Assistant Fitters	2	50 0 0		
(*b*) Fitter helpers	2	24 0 0		
(*c*) Turners	2	60 0 0		
(*d*) Welder	1	42 0 0		
(*e*) Blacksmiths	2	42 0 0		
(*f*) Hammerman	2	28 0 0		
(*g*) Moulder	.	32 0 0		
(*h*) Moulder helper	.	10 0 0		
(*i*) Tin smith	1	25 0 0		
			313 0 0	
Unskilled labour	.	34 0 0	..	489 0 0
Medicines and medical funds—				
Medicines app.	.	112 0 0		
Staff	.	88 0 0		
				200 0 0
			GRAND TOTAL .	15,982 8 0

List of Staff for Off-season.

		Rs. A. P.	Rs. A. P.
1. Cane Manager and Staff on Retention			330 0 0
2. Office, Sales and Stores			709 0 0
3. Factory Supervising Staff—			
(*a*) F. M. & C. Chemist	1	700 0 0	
(*b*) Chief Engineer	1	500 0 0	
(*c*) Asstt. Engineer	1	200 0 0	
(*d*) Shift Engineers	2	180 0 0	
(*e*) App. Engineer	1	20 0 0	
(*f*) Foreman	3	205 0 0	
(*g*) General Supervisor	1	40 0 0	
(*h*) Chowkidars	3	29 0 0	
(*i*) C. C.'s servant	1	25 0 0	
(*j*) C. E.'s servant	1	10 0 0	
(*k*) F. M.'s peon	1	8 0 0	
(*l*) Water man	1	8 0 0	
(*m*) Dryer clerk	1	18 0 0	
(*n*) Sweeper	1	8 0 0	
			1,951 0 0

APPENDIX A—*concld.*

List of Staff for Off-season—contd.

		Rs.	A.	P.	Rs.	A.	P.
Mechanical Staff for overhauling—							
(*a*) Fitters	9	382	0	0			
(*b*) Asstt. fitters	4	100	0	0			
(*c*) Fitter helpers	13	180	0	0			
(*d*) Khalasies	10	196	0	0			
(*e*) Coolies	9	76	0	0			
(*f*) Mochi	1	20	0	0			
(*g*) Electrician and his helper	2	50	8	0			
(*h*) Welder	1	42	0	0			
(*i*) Workshop	8	243	8	0			
					1,290	0	0
5. Chemical Staff on Retention					617	10	8
GRAND TOTAL					4,897	10	8

APPENDIX B.

Statement of freight rates.

Shamli to Sahranpur and Amritsar.

	S. S. L. R.		N. W. R.		Total.
	Rs. A. P.		Rs. A. P.		Rs. A. P.
Amritsar	0 2 3	+	0 7 6	=	0 9 9
Lahore	0 2 3	+	0 8 8	=	0 10 11
Kasur	0 2 3	+	0 7 10	=	0 10 1
Lyallpur	0 2 3	+	0 1 10	=	0 4 1
Ambala	0 2 3	+	0 2 9	=	0 5 0
Ludhiana	0 2 3	+	0 4 7	=	0 6 10
Abhor	0 2 3	+	0 8 1	=	0 10 4
Jullunder	0 2 3	+	0 5 10	=	0 8 1
Ferozepur	0 2 3	+	0 7 4	=	0 9 7
Moga	0 2 3	+	0 6 4	=	0 8 7
Taran Taran	0 2 3	+	0 8 0	=	0 10 3
Jhan Maghiana	0 2 3	+	0 14 10	=	1 1 3
Jaranwala	0 2 3	+	0 11 0	=	0 13 3
Sangla	0 2 3	+	0 10 10	=	0 13 1
Delhi Sahadra	0 2 7	+	..	=	0 2 7
Delhi	0 2 7	+	0 0 11	=	0 3 6
Rawalpindi	0 2 3	+	0 14 11	=	1 1 2
Peshwar	0 2 3	+	1 2 9	=	1 5 0

The Daurala Sugar Factory, Meerut.

1. The factory started in 1932—Capacity 800 tons.
2. The output is as under:—

	Mds. first class sugar.
1932-33	150,818
1933-34	189,838
1934-35	186,045
1935-36	274,251
1936-37	445,390

3. (*a*) *Cane.*—The area is a *gur* making area, and as such, much higher prices than those fixed by the Government, have to be paid, but even then cane has to be imported by Rail, from long distances. Limestone has to be imported from long distances.

(*b*) Rail facilities are available, but there is great trouble with regard to Kacha Village Roads.

(*c*) A portion of Labour has to be imported, and Labour, on the whole, is dearer than Bihar and even East United Provinces.

4. Double sulphitation. We are now converting it to Carbonatation. In the sulphitation process, the plant is less expensive and the process is cheaper to work. On the other hand the carbonatation process is more positive in its action, yields a higher recovery, and the sugar produced is of a better keeping quality. The principal items which raise the cost of carbonatation are limestone which has to be used to a quantity about 4 per cent. of the weight of the cane and coke. The determining factor will, therefore, be the distance of the factory from the quarries and the coalfields.

5. A 500 tons plant was put up in the season of 1932-33 at a cost of Rs. 8,71,145-5-11 for Machinery and Rs. 2,88,538-9-9 for building. It was extended to 800 tons in 1933-34, at a cost of Rs. 4,76,312-11-2.

The following changes or extensions were done:—

(1) Cane Carrier extended.
(2) Separate engine installed to drive the Cane Carrier.
(3) One extra Cane Cutter installed.
(4) Two motors installed to drive the Cane Cutters.
(5) Bagasse Carrier extended.
(6) Two more boilers added.
(7) One Electric driven boiler feed pump installed.
(8) Three more filter presses added.
(9) One Eliminator added.
(10) One set of evaporators added.
(11) Two crystalizers added.
(12) Two more vacuum pans added.
(13) Ten electric driven Centrifugals added.
(14) Grass-hopper was fitted under these centrifugals to convey the sugar to the cooler instead of dryer, used previously.
(15) One injection and one spray pump, electric driven were added.
(16) One steam engine driven alternator was installed to drive all the electric motors installed.

6. We are going to change the plant from double sulphitation to carbonatation this year.

7. (*a*) The overhead charges of a factory decrease relatively per unit increase of crushing capacity. The larger the factory, the less are the proportions to charges on skilled directing staff, depreciation and certain factory operation. The size will ultimately be determined by the Capital available, the availability of raw materials at a reasonable price in the neighbourhood and the facility of access to markets.

(*b*) The determining factors are the quality of cane and the duration of the working season. Generally speaking, for Northern India the minimum economic size is 500 tons crushing capacity and for Western India 400 tons.

8. Simple parts such as cast iron tanks and pipes and other plants comparatively easy to manufacture are obtainable in India. Generally speaking, sugar machinery is a specialised manufacture and has to be imported.

9. Yes and No. When we say, yes, we mean the Institute is willing to do all in their power, but they ought to be in a position to send experts more freely to advise on the spot in all matters.

Raw Materials.

10. Yes; we undertake cultivation of sugar cane on about 1,800 acres in 4 different places, all miles away from the Factory, the whole of which has been taken on lease. There is great difficulty in purchasing as the land belongs to a number of small zamindars, all of whom are not prepared to sell. It would have been difficult to get this land even on lease, but since most of the area was practically a waste consisting of a big belt of sand in one tract and '*Usar*, *Dhak* and *Dahr* (low-lying) in the other, which yielded next to nothing to the Zamindars, it was possible to get it. Recently we have taken some good land at very high rates, but the area is not likely to be consolidated, at any time, mainly due to two reasons:—

(*a*) That the district has *Bhaichara* system of Zamindari and the Zamindar is himself a cultivator and does not want to part with his land, because he will be thrown out of employment.

(*b*) That the fields belonging to occupancy tenants cannot be secured, as the Zamindars do not give their consent, and the tenant being afraid of ejectment and the restrictions of Tenancy Law, he is unable to give his land.

There must be powers, given to the District Magistrate, to acquire land for factory farming, adjacent to the factories.

11. (*a*) Total area of the Farm—1,749·047 Acres.

(*b*) Area under Cane cultivation is as under:—

	Acres.
1933-34	475
1934-35	776
1935-36	800
1936-37	1,100

(*c*) We grow a large number of varieties each year, for trial and then select out promising varieties to be grown on field scale and are distributed to the farmers as seed. The standard varieties are as follows:—

(1) Early—Co. 325, Co. 313.

(2) Medium—Co. 322, Co. 244.

(3 Late—Co. 356, Co. 331, Co. 349.

Some of the new varieties, recently imported, are under trial, and are as follows:—

Co. 373, Co. 19, Co. 370, Co. 406, Co. 407, HM. 337, HM. 320, HM. 250, HM. 89, HM. 619, HM. 617, HM. 613, HM. 609, HM. 607, HM. 606, Co. 511, Co. 516, Co. 501, Co. 430, Co. 428, Co. 426, Co. 421, Co. 419, Co. 417, Co. 413, Co. 416, Co. 412, Co. 411, Co. 408, Co. 407, HM. 360, Co. 354 and 208B.

The following varieties are found unsuccessful:—

Co. 213, Co. 290, Co. 386, P.O.J. 2878, EK. 28, Co. 355, Co. 248, Co. 310, Co. 301, Co. 281, Co. 299, Co. 232 and Co. 214.

(*d*) Uptil now, we were not following any rotation and had to grow cane year after year, but since the farm area has increased we have started a three year rotation, leaving one-third area fallow.

1st year. Planted cane.

2nd year. Ratoon.

3rd year. Fallow (Green manuring).

In addition to green manuring, we purchase 2½ lakhs cubic feet of rubbish, from Meerut Cantt., and about one lac maund of organic manures and other chemical fertilizers.

(*e*) As mentioned above our soil was practically waste land. Our average yield is not upto the mark, in comparison to the yields of Government farms. However, the yield for the whole area has been 500 maunds per acre. The yield of different varieties, in good land, roundabout, is as follows:—

Varieties.	Yield per Acre.	Brix.	Pol.	Sucrose Purity.	Contents month.
	Mds.				
Co. 285 . .	700	15·37	14·73	93·13	November.
Co. 313 . .	700	17·01	14·25	83·77	,,
Co. 312 . .	800	15·84	13·19	83·27	January.
Co. 244 . .	700	16·72	13·21	79·00	December.
Co. 331 . .	750	19·57	18·33	93·66	February.
Co. 356 . .	850	19·52	17·41	89·19	,,
Co. 349 . .	850	18·86	16·39	87·43	,,

12. (*a*) The area set aside for experiment is different in different years and is directly proportionate to the number of experiments. However, it is nearly 40 acres this year.

(*b*) We only distribute the most promising varieties of cane from both the points in view, *i.e.*, high tonnage and good sugar percentage.

The area, under such cane, for seed purposes, varies from 80 to 100 acres, each year.

13. Regarding early and late varieties, we lay out one experiment each year, to test their yield and time of maturity and other points concerning growth in respect of seasonal changes and compare them with standard varieties.

Regarding manurial test, we lay out the following experiments:—

Experiment No. 1.

To find out the suitable quantity of nitrogen for maximum yield on green manured plots and also the number of tillers in each treatment.

Applications.—150 lbs. nitrogen, 250 lbs. nitrogen, 350 lbs. nitrogen, and 450 lbs. nitrogen.

Experiment No. 2.

To find out the efficiency of nitrogen utilisation in different kinds of manures all applied at the rate of 150 lbs. nitrogen.

Manures.—(1) Castor cakes, (2) Mahuva cake, (3) Mustard cake, (4) rubbish.

Experiment No. 3.

To find out the suitable quantity of molasses for maximum yield and sucrose content.

Dozes.—200 mds., 300 mds., 400 mds., 500 mds. and 600 mds.

Experiment No. 4.

To find out the effect of nitrogen, phosphoric acid, potash and calcium against no manure on standard varieties of cane.

Co. 356, Co. 312, Co. 331, Co. 349, and Co. 385.

Experiment No. 5.

To find out the effect of nitrogen alone, phosphoric acid, and potash on basal treatment, of nitrogen against the control on tillering, yield and sugar percentage.

Nitrogen applied at 300 lbs. per acre.

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Experiment No. 6.

To find out the suitable manure to improve the texture of *Dahar* soil for maximum yield.

Treatments.—Molasses, press mud, sand and lime.

Experiment No. 7.

To note the effect of the following high dozes of manure per acre, keeping the soil always saturated with 80 per cent. of its water holding capacity.

Treatments.—1,500 lbs. nitrogen per acre, 600 lbs. potash and 300 lbs. phosphoric acid.

Experiment No. 8.

To find out the effect of application of sulphate of ammonia at sowing time on germination and tillering of the cane.

Experiment No. 9.

To find out the effect of superphosphate application on the time of maturity of cane and sucrose contents against control.

Treatments.—50 lbs. phosphoric acid per acre. The Department of Agriculture has very kindly lent the services of two Farm Superintendents who are working here on deputation.

14. (*a*) The gate supply of cane is increasing gradually as is evident from the figures of cane received at the gate, year by year, given below—

	Mds.
1932-33	1,225,851
1933-34	1,181,777
1934-35	1,472,350
1935-36	1,482,195
1936-37	2,531,320

(*b*) The quality of cane is gradually improving, as will be proved by the recovery in the following table:—

1933-34	8·04	
1934-35	6·31	Low recovery due to frost.
1935-36	8·95	
1936-37	9·37	

This improvement is not entirely due to better cane, but also to better efficiency in the factory.

15. Regarding frost and insect pests our observations are as under.

We usually get frost of a very severe kind once after every fifth year and insect attack after every 4th year. We sustain small losses each year. Such losses approximately come to 20 per cent. In the year 1934-35 we had to burn half of the cane on our Farm, as it was ruined by frost. The same thing happened with the farmers to a smaller extent.

16. The factory does not get sufficient supply of local cane for the whole season. Not only is sufficient quantity of cane not available at the gate but no early and late ripening varieties are yet common.

The principal varieties of cane crushed in the factory are—

	Approximate Pol. per cent. Cane.
(i) Co. 312	11·75
(ii) Co. 244	11·50
(iii) Co. 213	11·85

17. More than half the cane is imported from outside, except during the last season, and the rates differ every year, as it depends upon crop and percentage of recovery and rate of sugar; but almost always due to competition from sister factories and *gur* manufacturers, higher prices than these fixed by the Government, have to be paid.

18. The area under cane is steadily increasing, round about the factory, due to the satisfactory treatment meted out by the factory and high prices paid.

19. The production of sugarcane though highest in 1936-37 was quite insufficient for us as about one-half of the cane crushed by us, was imported from outside. On our side, not only no restriction is necesasry, but further encouragement is required.

20. Cost of cultivation, at cultivators' field, per acre:—

	Rs.	
Rent	20	(two years).
Preparation	...	His own labour.
Seed	15	
Sowing	...	His own labour.
Manuring	...	Whatever is available at his manure pit and his own labour.
Green Manuring	4	
Irrigation	10	
Hoeing	...	His own labour.
Tying	...	His own labour.
Supervision	...	Himself.
Harvesting and Cartage . .	...	He and his bullocks.
TOTAL .	54	

Average yield 350 mds. per acre and therefore the cost is 2 annas 6 pies per maund.

N.B.—It does not include cost for his labour, manure and cartage.

21. Difficulty in getting cheap manure, suitable seed, finance and want of knowledge of manuring. The Department of Agriculture could provide proper seed and manure, and by opening demonstration farms at short distances, educate them in the art of manuring. The factories will be prepared to finance, if some summary law could be devised to safeguard the factories. The improvement in the condition of village roads is most important.

22. (*a*) The last Tariff Board were against compulsory acquisition on the grounds—(*1*) that it would antagonise the expropriate ryot and his fellow-ryots, and (*2*) that it would interfere with the traditional freedom of cultivation enjoyed by the Indian ryot. In the opinion of the Association these objections still prevail in full force, and the acquisition of land for *a factory purpose* should be left to voluntary negotiations.

(*b*) This question does not interest the factories in Western India where they draw their entire supplies of cane from their own farms nor those in Southern India where factories have definite sources of supply in the fields of ryots with whom they enter into agreements. It is of importance however in the United Provinces and Bihar where owing to a large growth of new factories, conditions have altered since the date of the last Tariff Board's Report. The passing of Act XV of 1934, fixing minimum price of cane and the fact that no insuperable administrative difficulties have been experienced have removed the main objection to zoning from the ryot's point of view. In the opinion of the Association it would be desirable both with a view to remove uneconomic competition for cane and to establish a more intimate personal relation between the factory-owner and the ryot to introduce a system of zoning. But this should be restricted to gate cane.

The working of the system should be entrusted to a Committee consisting of all the factory-owners in the zone, two ryots' representative, and a Government Official. This Committee should meet every year and define zones either by allotting separate blocks of fields to individual factories or by defining centres of purchasing of cane at which there should be no competition between factory and factory. Such a Committee would act without undue rigidity and would be alive to any change in economic and crop conditions which required alterations in zones.

23. The Association considers that the development of feeder roads is the legitimate function of Local Boards. As regards advances of cash or supply of seed and manure, several factories even at present make them. Such advances should continue to be purely voluntary. It is suggested that if a summary process were provided for recovery of these advances the extension of the voluntary system would be facilitated.

24. (*a*) The Association considers that at present there is no need for fixing a quota, but realises that the need may arise in the near future.

(*b*) The last Tariff Board rejected a proposal for licensing on the grounds mainly—(*1*) that enlightened self-interest would prevent capitalists from starting new factories where old ones already existed and where there was no room for expansion, and (2) that the only safeguard for maintenance of fair prices for cane was competition between factories. The expectation underlying the first ground has not been realised and the second ground has been removed by Act XV of 1934. The Association considers that all new factories and extensions of existing factories should be subject to license. The licensing should be entrusted not to Provinces but to an all-India body, in which the present factory-owners should be fully represented.

25. For the last season, our figures, were as follows:—

	Per cent.
Gate cane	60
Rail cane	20
Tram Bourne cane	20

The gate cane supply has been steadily increasing for the simple reason that no other crop pays the farmers so well and he is very well treated.

26. Cane is received mostly by carts. Average weight in each cart is 20 to 25 maunds.

It is possible to carry 1½ or 1¾ times load of cane in rubber tyre carts on Pukka Roads, but there are some difficulties in popularising such carts for the transportation of cane, which are as under.

(*1*) To change the present type of carts, if rubber tyres are used, the owner of the cart has to change the body of the cart also, without which carting of more cane is impossible, *i.e.*, one has to prepare quite a new cart and the old carts will become altogether useless.

(*2*) The bullocks will not be able to pull such carts in uneven muddy and sandy places and the farmer will be forced to load it in the old carts to take it to the factory. The rubber tyre carts may become popular, if all the Kucha roads are converted into pucca roads. We have one cart of rubber tyres with a net type of body on it and about double the quantity of cane can be carried with it, but when we wish to carry cane from the fields, we bring it in two trips to make one load of this rubber tyre cart, *i.e.*, such carts are only useful on pucca roads.

27. Conditions of pucca roads is good, but condition of feeder roads (cart tracks) is very unsatisfactory.

28. Most of the cane is received from within five miles, but sometimes where the condition of road is good, cane is brought from a distance of even 8 to 10 miles. Time taken from cutting of cane and selling it in the factory is usually 24 to 36 hours.

29. The cane growers use their own carts to bring cane into the factory.

30. No toll is levied in our locality.

31. To ensure regular supply of cane, we issue cards to the cane growers a fortnight in advance.

When cane is brought according to cards, the carts are detained for not more than four hours, but when the farmers bring cane without cards, (*i.e.*, requisition) and in excess of our requirements, they have to wait even for a longer period as it is difficult to control and to weigh these in a short time. Erection of sufficient number of weighbridge to weigh quickly and the employment of efficient and sufficient labour to unload the cane for feeding in the carrier and stacking the surplus, has facilitated the release of carts with in a very short period.

32. In 1933-34 we brought sugar cane from a distance of 293 miles by rail, in 1934-35 *from* 212 miles, in 1935-36 from 152 and in 1936-37 from 79 miles.

As the margin of profits every year has been lessening, it was not a paying proposition to import cane from a longer distance.

This year the time between cutting and delivery in the factories has been about 48 hours and in some cases more. During the previous years it has been more than this due to longer distance. As compared with the previous years, the arrangement and carriage of sugar cane has been satisfactory and if still better arrangements be made, in future, it will help the factory owners to run for longer periods. We have, however, on many occasions received our cane wagons in from 7 to 20 days.

33. There is a mileage wagon rate prevalent for the carriage of sugar cane on the East Indian Railway and North Western Railway, but the rates on the North Western Railway, as compared with the East Indian Railway are very high.

East India Railway.	Rs.	*North Western Railway.*	Rs.
Up to 35 miles	10	10 miles	8
Beyond that upto 300 miles, after every five miles Re. 1 is increased.		Upto 19 miles	3
		20 to 50 miles, after every 2 miles Re. 1 is increased and after 50 miles to 300 miles Re. 1 after every 5 miles is increased.	

The cane has to be brought from stations in the East Indian Railway, and a short distance has to be travelled on the North Western Railway. The North Western Railway rates are particularly high for short distance and so it becomes very difficult to bring cane. The rates in the North Western Railway should be on the same basis as on the East Indian Railway flat rate per wagon is preferable, otherwise due to weighment of wagons greater delay will take place and cause deterioration.

34. The freight rates on manure should be kept very low, particularly for cheap country manures such as oil cakes, etc. Lime and limestone—Dandaut from where lime is imported on the North Western Railway is situated at a distance of 442 miles and freight of lime per maund from Dandaut to Daurala is 4 annas and Gotan situated on Jodhpur Railway is at a distance of 471 miles and the freight from Gotan to Daurala is 5 annas 7 pies per maund. From the above it will be found that the rate of the lime from Gotan as compared with the distance, is much higher and in the interest of industry it will be necessary to approach different railways to bring their rates at least to the equal level of the North Western Railway if not lesser to that.

35. The length of the tramway, by which cane is imported is 21 miles. The average cost of carriage per maund of cane from 5 to 21 miles is 7½ pies. This length contains 8 stations and we can bring cane at this rate from any station. The charge is borne by the factory. The reduction in the rate of 1 pie per maund per mile not exceeding one anna, at a place from where the cane is brought by road, as sanctioned by Government, should be made applicable on the tramway line and rail also to enable the cultivators to grow more cane, which is, in the interest of the factories as well as of the cane growers.

36. It is advantageous, but the rates must be kept very low.

37. The cane imported by road does not deteriorate much upto the time of bringing it to the factory. When the cane is brought by rail and delayed,

it suffers from deterioration to a great extent, particularly during the end of crushing season, as at that time, the hot weather affects it badly. It is only during the last period of crushing season that cane is imported heavily by rail from outside. Brix of primary juice goes up about 18 to 22 degrees, while the purity falls down from about 87 to 74, thereby increasing the non-sugars.

38. The cane purchased in 1936-37 from cane growers and our Farm is 3,315,280 maunds, (*b*) the cane purchased through agents and contractors is 1,404,739 maunds.

39. We do not advance cash to cultivators. We help them by providing good seed in return for the same quantity of cane, to be supplied at the crop time no interest, etc., is charged. We are prepared to provide manure, but farmers do not care for it.

40. At gate, we purchase cane direct from the growers, when we purchase cane from outside, we generally do it through our own employees and sometimes we purchase through cane agents. We have to offer different rates for loading and driage in different months due to scarcity of labour and due to more or less best, in addition to their commission of 3 pies per maund.

41. Yes, a part of our cane supply is obtained through the Sugar Cane Co-operative Society of Meerut and Moradabad on commission basis.

42. We weigh cane on weigh-bridges and the payment is made at the same time, *i.e.*, within one hour of weighment.

43. Average prices of cane paid during different years were as follows:—

	As.	P.	
1932-33	9	10·9	
1933-34	6	11·8	
1934-35	5	11·74	
1935-36	6	1·99	
1936-37	5	0	approx.

44. Rate of cane is always fixed by the Government, keeping in view the rate of sugar prevalent in the market but we have very often to pay more due to competition from other factories and *gur* prices being high.

45. The rate at which cane is purchased always depends upon the rate of *gur*, at that time.

46. The rate of *gur* or Jagree always varies. In the beginning the rate of *gur* is always very high, as the stocks are low, and when people produce more *gur* to get the benefit of high rate, the rates begin to fall due to fresh supply of *gur* coming in the market.

47. Very often we pay prices in excess of the rate fixed by the Government, by one or two pice per maund, due to high rate of Jagree or competition of other factories.

48. The Association is of the opinion that the existing formula which relates the price of cane to the price of sugar and the existing practice in the United Provinces and Bihar which entails revision of the price of cane every fortnight are both unsatisfactory. The formula results in a vicious circle, a fall in the price of sugar leads to a fall in the price of cane, this in turn leads to a fall in the price of sugar and so the process goes on. A fortnightly revision of the price creates undesirable uncertainty both in the minds of the ryot and of the factory-owner whose stocks of sugar produced from cane bought at a higher price deteriorate in price, when the cane price is subsequently lowered. The price of cane should be disconnected from the price of sugar and should, it is suggested, be fixed on the cost of production of cane as ascertained by the Tariff Board in its present enquiries,

It is necesasry that the price should be uniform for both the United Provinces and Bihar. And the price once fixed at the commencement of the crushing season should be maintained for the whole of that season.

49. The Association has repeatedly considered the question of introducing a bonus but has not been able to advise a satisfactory formula.

50. The duration of cane crushing season in last years is as under:—

	Days.
1932-33	181
1933-34	146
1934-35	147
1935-36	147
1936-37	185

During the first and the last seasons the quality of cane was sufficiently good, even during the months of April and May, due to the weather not being too hot, such conditions are not obtainable every year. Taking the average, the duration of crushing season is not sufficiently long for economic working. The crushing season can be extended by the introduction of late and early varieties of sugar cane.

52. The assistance given by the Imperial Council of Agricultural Research and the Agricultural Co-operative Department of Governments has not been able to touch even the fringe. However, it can be of great use if conducted on proper lines.

Labour.

		Rs.
53.	680 skilled labour during the season worth	45,000
	250 unskilled labour during the season worth	22,500
	226 skilled labour during the off season	18,000
	150 unskilled labour during the off season	4,200

54. With the exception of the Chief Chemist and 3 Java Panmen, all labour is Indian.

55. We have to engage the same skilled imported labour upto this time, as we had, in the beginning. Thus we have not been able to replace the imported labour by Indian labour.

56. Quarters have been provided and fitted with electric light and drinking water to the labour in general. Free medical advice and medicine is also provided as also a primary school is started.

Power.

57. We have gradually been reducing the consumption of fuel other than bagasse. Figures are given below:—

	Rs.	A.	P.
1932-33	12,154	6	9
1933-34	5,830	7	3
1934-35	5,780	3	8
1935-36	5,736	11	10
1936-37	5,993	1	1

Bye-Products.

58. Molasses.

59. Outturn and prices of Molasses:—

	Produced Maunds.	Sold Maunds.	Total Price.	Average Price.
			Rs.	As. P.
1933-34	110,860	1,737	380	3 6
1934-35	123,931	34,240	3,424	1 6
1935-36	127,411	63,419	11,891	3 0
1936-37	168,656	62,304	6,430	1 3

As is apparent, the price per maund, of molasses have been considerably fluctuating, and comming down. Causes for the same are:—

(*a*) Over-production of the stuff.

(*b*) Less consumption. A very few factories are using it for manufacturing methylated spirit out of it.

(*c*) Keen competition in the market to dispose off the bye-product.

(*d*) No further scope, at present, to use it in any other directions.

60. The markets are Amritsar and Karnal Distilleries. Molasses is transported by rail in tank waggons, but the facilities given by the railways are inadequate. The freight rate from the Factory to the consumer markets varies from 4 to 5 annas per maund.

61. When molasses have remained unsold, we have sometimes burnt the same along with bagasse and sometimes we use it for manuring. We have used it for manuring, this year only, otherwise we let it flow in the rains in the river. The only use they can be put to is the manufacture of power alcohol.

62. A small quantity can be used for making cardboards, etc. We are using the surplus bagasse which we had only in the last season as fuel for power required during the off season. If the freight to the strawboard manufacturing states was considerably reduced, they might use it.

63. No.

Storage and transport of sugar.

		Opening balance	Closing balance.
		Mds. Srs.	Mds. Srs.
64.	1932-33	*Nil.*	5,024 30
	1933-34	*Nil.*	22,490 20
	1934-35	1,552 20	75,531 0
	1935-36	*Nil.*	54,167 20
	1936-37	270 0	143,267 26

65. We have got 3 godowns for storing sugar which can contain about 55,000 bags of sugar. We have increased the capacity of our godown and are contemplating also to increase it even more.

67. We adopt both the methods to dispose off damaged sugar, *i.e.*, direct sale and remelting.

68. We are converting the factory to carbonatation, when, we believe no difficulty will be felt.

69. We load sugar in the presence of the Railway clerk who is paid by us, and the Railway is responsible for all losses, or damages in transit. The damage is negligible if any.

70. Sometimes we experience very great difficulty in obtaining wagons for transportation of sugar. We always sell sugar f.o.r. Baurala.

72. (*a*) During the season 1933-34, a number of bags of sugar were sent to Bombay for sale, which could be sold at a price which left us Rs. 10-4 per maund, while the average price during the same period, at factory was Rs. 10-7-0 approximately. As our sugar could not be sold there, except at much below *ex*-factory rates, we gave up port business.

(*b*) The average prices, *ex*-factory, realized for the whole season in up-country are as under—

	Rs.	A.
1932-33	10	7
1933-34	9	11
1934-35	9	0
1935-36	8	8
1936-37	7	2

A list showing the freight rates of the markets which generally consume our production are given below:—

	Rs.	A.	P.		Rs.	A.	P.
Amritsar	0	10	0	Mian Channu	0	15	7
Abdullahkim	1	1	1	Multan City	1	1	4
Bakkar	1	4	10	Mandi Bahauddin	0	15	0
Bhawalnagar	0	12	8	Mandi Brewala	0	15	0
Chistian	0	13	7	Phularwan	1	0	2
Chichawatni	0	14	7	Pinddadarkhan	1	1	4
Dinga	0	14	6	Rawalpindi	1	1	7
Dera Nawab Sahib	0	5	0	Sukkur	1	0	6
Fort Abbas	0	14	10	Sukkur Br.	1	0	6
Gujranwala	0	12	7	Sarai Alamgir	0	14	8
Gujarkhan	1	0	2	Shikarpur	1	0	9
Gujrat	0	13	7	Sibi	1	1	9
Hasilpur	0	14	3	Sargodha	0	15	9
Havelian	1	3	3	Tamrauli	0	15	0
Jacobabad	1	0	11	Simla	0	11	2
Jaranwala	0	13	5	Tandilawalan	0	14	5
Jullundor City	0	8	3	Vihari	0	15	9
Jammu Tawi	0	13	10	Bannu	1	8	6
Khanpur	1	3	3	Peshawar City	1	5	1
Khushab	1	0	9	Lahore	0	11	1
Khanewal	1	0	3	Darya Khan	1	4	5
Larkana	1	0	4				

Capital Account and Overhead Charges.

73. Copies of Balance Sheets from the commencement of the Factory are enclosed herewith.*

74. Particulars of the amount written off for depreciation are almost the same as allowed by the Income-Tax Department. A statement is attached herewith.

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* Not printed.

75. No separate amount is set aside for Reserve Fund, except what may have been set aside by the parent company.

76. Does not arise.

77. Working Capital is provided by the parent company. The rate at which it borrows varies from 2 to 5 per cent.

78. Annual amount of Head Office expenses is Rs. 28,800. Agents' Commission is paid at the rate of 10 per cent. on profits.

79. 10 per cent. on the original block account (without allowance for subsequent writings off for depreciation) would be a fair return. The reasons for this view are—

(1) That in the years when new factories were started in large numbers, money was procurable only at high rates of interest, and debentures were generally issued at 7 to 8 per cent.

(2) The Industry is a young industry and both in the interests of the factory and of provision for labour welfare, reserves have to be built up. If 10 per cent. is earned, 4 per cent. will have to be put aside for the reserve fund, and the actual dividend to the shareholder would only be 6 per cent., and

(3) Provision has to be made against running risks, breakdown of machinery and so forth.

80. Forms*, received from the Board, are sent herewith duly filled in as desired.

Comparative statement of working cost since 1932.

	Recovery per cent. Cane.	Working cost per maund of sugar manufactured. Rs.	A.	P.
81. 1932-33	*Nil.*	1	7	8·8
1933-34	8·04	1	2	3
1934-35	6·31	0	14	11·2
1935-36	8·95	0	11	9·301
1936-37	9·37	0	10	4·26

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The plant was extended from 500 to 800 tons during the year 1933. During the year 1936, some changes were made in the machinery to get efficient working. As already stated the crushing figure has been high during the season 1936-37, on account of natural conditions.

Due to experience the quantity of cane crushed has been increasing year after year, this, along with better recovery and longer season are responsible for the reduction in cost. These costs do not cover depreciation, bonus to staff, off-season expenses, selling agents commission, and Manager's commission as well, as Managing Agents' commission at 5 per cent. and 10 per cent. on profit respectively.

82. We do not think that the cost of manufacture can be reduced any more. On the other hand we are afraid that since the factory has been running a few years and crushing much higher quantities of cane than it was meant for, it has put great strain on every moving part, including the Engines. The sulphur and acid have also affected a good deal of the Plant and if these will have to be changed, the cost will increase further.

Marketing.

83. The main market centres for us are the Punjab and the North-West Frontier Province.

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* Not printed.

84. We sell our sugar through sole commission agents, who are responsible for the realization of our dues after delivery of goods.

86. We have given reply to this in our No. 72.

87. We do not deal in retail.

88. We have no knowledge.

89 and 91. It will be convenient to deal with these two questions together. The best quality Indian Sugar is as good as the best imported foreign sugar in keeping and other qualities.

90. Java sugar is preferred in hotels and restaurants run in the European style for their customers, Europeans and Europeanised Indians. But even here high grade Indian Sugar are replacing Java Sugar. To a very small extent, in the preparation of some special Indian sweets where customers like a bright white colour. Java sugar is used.

92. (*a*) We carry about 40 per cent.

(*b*) We know nothing about the dealers.

In our case the parent company provides the finance and itself borrows from the Bank.

93. We believe that a marketing survey would be of advantage as it is an essential preliminary to the operation of a central marketing organisation.

94. We are in favour of establishing a Central Sales Organization to be controlled by the Industry itself. Detailed proposals are under the consideration of a special Sub-Committee of the Association.

95. We are in favour of standardization as it is an essential preliminary to the operations of a Central Sales Organization. Experience was not available when standards were tentatively suggested and factories were not able to adopt them. They had therefore to do business on the basis of samples of individual factories.

96. (*a*) and (*b*) Actual business on the basis of the Director's Standards has been done only by a very few factories. Several factories have however utilised the standards for grading their own sugar, and others have with their help classified their daily output.

It is stated by several factories that while they use the standards for grading their sugar, they are unable to do actual business on them as buyers, merchants and dealers do not possess a set of them.

97. A material reduction in the price of the standards may tend to popularise them.

99. The estimate for the present consumption of white sugar should be supplied by Mr. R. C. Srivastava. If sugar could be sold at Rs. 5 per maund, the consumption would go upto one and a half million tons.

100. It is not possible to say to what extent factory sugar is replacing *gur* as judging from statistics both industries are expanding. In the sweetmeats trade, however, it is a matter of common knowledge, that while for certain sweets *gur* is still preferred, the substitution of sugar for *gur* has gone far. It is impossible to make an estimate of the extent of this substitution.

101. See paragraph 110.

104. Sugar has not been exported, as yet, but if the Department of Agriculture helped the farmer in producing varieties of cane, which will give him an yield of about 35 tons of cane per acre, with a recovery of about 11 per cent. and the Government also helped the factories in getting some waggons, for their molasses and the railways quoted low rates as in the case of petrol for Afghanistan then India could produce sugar at competitive prices with other countries and export.

105. The effect of the excise duty of sugar, has been, on the one hand, to restrict the undesirable expansion of the Sugar Industry and on the

other a reduction in the consumption of sugar. If the duty of Rs. 1-8 per maund was removed, we have no doubt the consumption of sugar would increase by about 20 per cent. within a year and more later on.

106. There are no marketing arrangements for molasses worth the name. The factories, near Calcutta, can get a nominal value while as the factories in the interior can occasionally sell their molasses to distilleries in small quantities.

107. Export of molasses from India—

——	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Aden and Dependencies.	13	12	11	13	..	..	..
United Kingdom .	..	..	7	179	153	..	13,622
Ceylon . . .	390	658	707	890	890	925	923
Union of South Africa	13	12	9	14	..	..	9,500
Zanzibar and Pemba	14	15	17	17	..	..	..
Other British Possession.	13	21	13	19	..	..	..
Other countries .	..	..	..	..	110	101	140
TOTAL .	443	718	764	1,141	1,153	1,026	24,185

108. We think the amount of protection had the desired effect.

109. The Industry having reached a stage where imports have more or less, been stopped, protection should be given sufficient to see that foreign sugar does not enter the country. There will be no harm if the present protection is continued except that, in case of a Marketing Organization materializing, there is a danger of the price being unnecessarily raised too high at the cost of the consumer. The Governor-General in Council may take powers to reduce the protection, if such an occasion arises.

110. (*a*) The most important form of assistance that the Government should and must give is to place a big sum of money, at the disposal of the Directors of Agriculture, in such provinces where the Industry plays a big part in the economy of those provinces, so that the Department, in the shortest time, may produce, such varieties, as will make it possible for the sugar to be exported.

(*b*) The Government ought to help the Industry, by giving licenses for the manufacture of power alcohol, and compel the oil companies to mix a certain percentage of the same with petrol before marketing the same. The Government can, however, charge the necessary excise duty, so that it may not suffer in revenue.

(*c*) Model factories, for the manufacture of other articles, like cattle food, yeast, acetic acid, etc., sweets, preserves should be established by the Government, and aftre demonstrating their use, they should be sold to the highest bidder. Demonstration factories, for the manufacture of sweets, etc., should also be established on the same basis.

111. We do not think that the import duty on molasses has adversely affected the industry in India.

Rai Bahadur Narain Singh Sugar Mills, Ltd., Meerut.

Letter No. 242/37, dated the 23rd June, 1937.

We have the pleasure to enclose herewith the answers to the questions relating to our factory. We hope you will find it in order. As our Chief Chemist has gone out of India therefore the Form No. III relating to question No. 80 has not been filled.

1. Our Factory commenced working in the year 1933-34.

2. Our Factory manufactured the following quantity:—

Sugar Manufactured.

	Mds.	Srs.
1933-34	66,230	0
1934-35	65,152	20
1935-36	143,122	20
1936-37	237,702	20

3. (*a*) Our Factory is situated in a good cane growing tract but lime, etc., is brought from a long distance.

(*b*) As regards the facility of rail, roads and other communications the situation of our Factory is the worst possible. Our Railway has not got sufficient Rolling Stocks to meet our demands and the freight charges are very high as compared with other Railways. There is absolutely no pakka road in this tract. With a little shower of rain the roads become so dirty that the transportation of cane is rendered impossible and we have to stop crushing for many days.

(*c*) There is no difficulty about the labour but it is not so cheap as in Bihar or Gorakhpur.

4. Our Factory work with double sulphitation process. It is a cheaper and easy process with less expensive plant while the carbonatation process yields higher recovery with better keeping quality but it is expensive as it requires lime in much quantity so much as the 4 per cent. of the weight of the cane.

5. Since the erection of the factory no extension has been done, only few pumps which were weaker in action has been duplicated. The following amounts have been invested on those pumps, etc.:—

	Rs.	A.	P.
1934-35	23,769	7	5
1935-36	8,101	9	9
1936-37	70,459	3	9

6. This year we intend to add one more Vacuum Pan, one triple effect evaporator and about half a dozen settling tanks and replace the vacuum engine sulphur furnace, lime pump and air compressor.

7. (*a*) The overhead charges of a factory decrease relatively per unit increase of crushing capacity. The larger the factory the less are the proportional charges on skilled labour, supervising staff and depreciation, etc. The economical size will depend upon the availability of the raw material at a reasonable price and the facility of access to markets.

(*b*) In our opinion no factory with a crushing capacity of less than 500 tons cane will be economical in these days.

8. Simple parts such as cast iron, tanks and pipes and other parts comparatively easy to manufacture are obtainable in India. The engines and other technical machinery has to be imported.

9. The assistance of Imperial Institute of Sugar Technology is very useful in successful working of the factories.

10 to 13. We do not undertake the cultivation of sugarcane.

14. The quantity of cane available is increasing every year and the quality of cane is also improving.

15. In the year 1934-35 the cane of our area was attacked by Perryilla and the loss was estimated up to 40 per cent. The factories of this locality had to stop working after working two months only.

16. There is sufficient cane in the tract but due to the bad means of communication the whole of it can not be transported to the Factory.

17. Due to the inefficient Railway and bad roads no other factory can compete.

18. (*a*) The area under cane cultivation is increasing every year.

(*b*) The increase of area under cane cultivation is due to the fact that the cane give the highest cash value than any relevant cash crop such as wheat, etc.

19. There is absolutely no necessity of restricting the cane cultivation in our area, as we stopped crushing this year about one month earlier than other factories. The cane of the locality being exhausted and there being no scope for the import of sugar cane due to inefficient railway and bad communications.

20. We do not cultivate the cane.

21. The main difficulty in our area to the cane-growers in the delivery of the cane to the factory is due to the bad roads, etc.

22 & 23. We do not require any zone system as there can be no competition in our area.

24. We think that all new factories and extention of existing factories should be subject to license.

25. The proportion of rail cane as to gate cane has been given below:—

1933-34	1 to 11·7
1934-35	1 to 6·6
1935-36	1 to 3·2
1936-37	1 to 2·9

26. Our entire gate cane is transported by carts. An average weight carried by one cart is 20 maunds of cane.

27. There is not even a single mile of pakka road in our vicinity.

28. The cane is brought in our factory from a distance up to 6 miles only and the time taken between cutting of the cane and delivery in the factory is generally 24 hours.

29. The average cost of transport of cane by cart is about 2 pies per maund per mile. The cane-growers mostly employ their own carts. There are very few who hire the carts.

30. No toll, etc., is levied on the carts supplying cane to our factory.

31. In order to regulate the uniform supply of gate cane we issue passes and *parchies* to the zamindars with the date and time when they are to bring their cane in the factory according to our requirements. On the average about two hours are taken to weigh and unload the cart and make the payment of the price of the cane.

32. We bring the cane from about 20 to 30 miles from either side by Railway. The time taken between cutting of cane and delivery at factory is about 48 hours. The Railway arrangement to transport is worst as they have not got sufficient number of cane trucks to transport the required amount of cane.

33. There are no fixed rates on this Railway for transportation of cane. The Manager of the Shahdara Saharanpur Railway charges the freight with

his own discretion. He can charge preferential rates from one mill out of the two mills on this line. Last year Rs. 10 per truck were charged over a distance of about 30 miles and this year Rs. 6 has been charged.

34. Our Railway charges much higher rates on every material coming in or going out from our Factory. We would suggest that all the Railways should be allowed to charge the freight on equal basis specially on sugar cane.

35 & 36. We have not got the Tramway's services.

37. It is difficult to give a fixed rate of deterioration as the rate of deterioration depends on many factors, *i.e.*, season, method of preserving, etc., and the rate of deterioration is not proportional to the time.

38. Nearly whole of our cane is purchased direct from the cane-growers, about 4 per cent. cane is purchased through agent.

39. We issue passes to zamindars to supply cane according to our requirements. We do not give any advance, etc.

40. We generally purchase cane direct from zamindars only one pice per maund commission is paid to the agent for the cane purchased through agent. The cane bought through the agent is weighed at our factory weighbrigde.

41. No cane has ever been purchased through any cane supplying associations.

42. The cane carts are weighed on the weighbridge of the factory and the payment of the cane price is made there and then.

43. Last four years we have purchased the cane on the below given rates. These prices vary at different period of the season which is due to the variation of prices of Gur, Jaggery or Khandsari, etc. The price at which the cane has been purchased are as follows:—

——	1933-34.	1934-35.	1935-36.	1936-37.
	As. P.	As. P.	As. P.	As. P.
Average rate of cane purchased	5 $11\frac{11}{12}$	5 $3\frac{5}{6}$	6 $6\frac{2}{3}$	4 $9\frac{1}{2}$

44. The prices of sugarcane varies with the prices of Gur and Jaggry.

45. In our vicinity the price of cane mainly depend upon the prices of Gur and Jaggery. Zamindars will prefer the system where they get more money if making of Gur pays they will make Gur and if the factory prices are favourable they will sell their cane to the Factory.

46. The prices of Gur and Jaggery are going down and down every year this is perhaps due to the more area under cane cultivation than before. Whenever zamindars find the difficulty to bring the cane in factory due to bad roads, etc., in rain they make Gur of their cane.

47. We have generally paid one or two pice more hire than the minimum price fixed under cane rules. This is due to the difficulty the zamindars find due to the bad roads and other communications in delivery of the cane in the factory.

48. In our opinion the basis on which the prices of sugar cane is fixed is not satisfactory as the price of cane is effected by the current rates of sugar, Gur and Jaggery but under the cane rules the price is fixed on the basis of the price of sugar during previous fortnight. It is harmful to the factories because if the price of the sugar goes up in the current fortnight zamindars will at once demand higher rates for cane and if prices of sugar go down the factory owner cannot reduce the price of the cane below the minimum rate fixed on the basis of previous sugar rates.

49. It is most difficult to introduce a system of bonus. It creates a lot of trouble and dissatisfaction among zamindars and lot of botheration has been experienced in settling the quality cases.

50. Our factory worked for the following number of days in every year:—

	Days.
1933-34	86
1934-35	82
1935-36	128
1936-37	148

The variation is due to the facts that in the first year our factory was erected late and second year the cane crop of our locality was diseased and it was absolutely uneconomical to run the factory. In the third year we had to stop crushing after exhausting the local cane as our railway did not co-operate with us as they were short of waggons and we could not import cane from outlying area and the last season also we had to stop crushing after exhausting the local cane as the railway could not transport cane to run our factory upto economical crushing.

51. There are very little possibility of extending the crushing season.

52. The assistance rendered by the Imperial Council of Agricultural Research is of great use in successful working of a sugar factory.

53. In crushing season we employ about 425 skilled labourers and about 250 unskilled labourers every day and in silent season an average about 35 skilled and 20 unskilled labourers are employed.

54 and 55. Only a Chief Chemist, a Chief Engineer and three Pan men were imported and now we have replaced the Chief Engineer with a local man.

56. Quarters have been built for housing the labourers.

57. In the beginning we had to spend some extra fuel, *i.e.*, coal and wood but last year we could save out of the Bagasse. Only a little extra fuel was used in beginning to heat the boilers. The price of the fuel spent is as follows:—

	Rs.	A.	P.
1933-34	30,292	6	9
1934-35	22,782	0	0
1935-36	18,473	12	0
1936-37	6,480	14	0

58. Mollasses is the only by-product of our Factory.

59. The exact weight of the mollasses is not known as it is not weighed in our factory but we think that mollasses outturn is about 5 per cent. of the weight of cane crushed in an average year. We sell the mollasses at a nominal price. The price varies a little due to the over-production.

60. There being no adequate arrangements for the transportation of mollasses, we dispose off our mollasses in the locality of the factory at a nominal price.

61. We do sell our mollasses at a nominal price.

62. Previously we had to spend extra fuel but this year the Bagasse have coped with the fuel requirements.

64. Below given are the figures of stock of sugar at the beginning and ending of each crushing season:—

	Beginning of crushing.	End of crushing.
		Mds. Srs.
1933-34	*Nil.*	*Nil.*
1934-35	*Nil.*	31,732 20
1935-36	*Nil.*	55,552 20
1936-37	*Nil.*	10,607 20

65. We have got a godown in our factory which can contain 25 thousand bags. We have not increased the storage capacity in recent years nor do we contemplate doing so.

66. We never kept much sugar in stock, it deteriorates in rainy season.

67. Our sugar was never damaged.

68. The keeping quality of sugar can be improved with better boiling.

69. The sugar is damaged in transit during the rainy season due to leakage of waggons and humidity in air.

70. Our railway is short of rolling stock and we do find difficulty in getting the waggons for booking sugar.

71. Shahdara-Saharanpur Light Railway should have more covered waggons and cane trucks to meet the demands of two mills erected on this line.

72. We sell all the sugar through the agent f.o.r. Baraut and we give below the average prices of sugar per maund of fetched during four years:—

	Rs.	A.	P.
1933-34	8	12	8
1934-35	9	1	9
1935-36	8	8	⅓
1936-37	6	12	9

73. Copies of Balance sheet are enclosed.*

74. The depreciation written off by our Company is at the same rate as allowed by the Income-tax Department the amounts are given below:—

	Rs.	A.	P.
1933-34	57,555	7	9
1934-35	50,855	15	0
1935-36	58,352	4	0
1936-37	62,664	2	0

75. We give below the stock amount of reserve funds kept each year:—

	Rs.	A.	P.		Rs.	A.	P.
1933-34 . .	6,949	3	3	1935-36 . .	22,590	14	10
1934-35 . .	*Nil.*			1936-37 . .	48,128	5	1

76. The actual amount distributed as dividend on capital is given below:—

			Rs.
1933-34 . .	*Nil.*	1935-36 . . .	1,12,500
1934-35 . .	*Nil.*	1936-37 . . .	1,50,000

77. We borrow our working capital at a rate of interest upto 6 per cent. per annum.

78. As we do not charge the Head Office expenses under a separate head therefore the Head Office expenses cannot be estimated. Our Managing Director charges lump sum of Rs. 6,000 a year.

79. We think about 10 per cent. dividend is a fair return on capital.

80 & 81. The filled up forms* are enclosed herewith.

82. The recovery rates can be improved with improved variety of sugarcane and experienced skilled labour.

83. Our sugar is mostly sold in Punjab and Delhi.

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* Not printed.

84. We have got agents to sell the sugar in different markets and the agents bears the third party risk. They are paid a commission of Re. 1 to 1-8 per cent.

85. The present contract form is quite satisfactory.

86 to 88. We are not acquainted.

89. The best quality Indian Sugar is as good as the best imported foreign sugar in keeping and other qualities.

90. Java sugar is preferred in Hotels and Restaurants in the European style for their customers, Europeans and Europeanised Indians, but even here high grade Indian sugar are replacing Java Sugar.

91. See answers to question No. 89.

92. We generally dispose off the major portion of our stock of sugar in manufacturing season. We collect the prices of sugar through Banks. The Railway Receipts are sent to Banks on agents' risk.

93. We consider that a marketing survey would be of advantageous as it would help the operation of central marketing organisation.

94. Yes, we are in favour of central selling organisation.

95. We consider that the Indian Sugar should be standardised as it will help in working of the central all-India selling organisation.

Simbhaoli Sugar Mills, Ltd., Meerut.

1. Our factory started in 1933-34 and its rated capacity is 400 tons.

2. The output is given below:—

	1933-34. Mds.	1934-35. Mds.	1935-36. Mds.	1936-37. Mds.
Crystal No. 1 .	84,108	100,891	138,984	189,691
,, No. A .	1,323	1,209	590	2,562
,, No. 2	575	...	1,415	...
Total .	86,006	102,100	140,989	192,293

3. Our factory is advantageously situated in respect of cane supplies. Important markets facility of rails, road and other communications also there is no trouble as regards labour supply.

4. The process of manufacture of our factory is double sulphitation. The sulphitation process plant is less expensive and the process is cheaper to work. On the other hand the carbonation process is more positive in its action, yields a high recovery and the sugar produced is of a better keeping quality. The principal items which raise the cost of carbonation are limestone which was to be used to a quantity about 4 per cent. of the weight of the cane and coke. The determining factor will, therefore, be the distance of the factory from the quarries and coal fields.

5. No change has been made in layout of our factory and only minor extensions were made such as one set of cane knives, one raw juice pump as a duplicate arrangement and one mud pump to replace the old one involving a sum of about Rs. 17,000.

6. We are putting up a new boiler of 3,500 sq. ft. heating surface, one pan, one preheater before the tripple, four settling tanks, four mollasses tanks, one injection water pumping set, etc.

7. (*a*) The overhead charges of a factory decreases relatively per unit increase of crushing capacity. The size will ultimately be determined by the capital available, the availability of raw material at reasonable price in the neighbourhood and the facility of access to markets.

(*b*) The determining factors are the quality of cane and the duration of the working season. Generally speaking, for Western India the minimum economic size is 400 tons.

8. There are only few things that are available in India such as tanks and other cast iron parts. Rollers of Mills are also being made but are very unsatisfactory. Generally speaking, sugar machinery is a specialized manufacture and has to be imported.

9. The cases in which any assistance was given by Imperial Institute of Sugar Technology and the Industries Department of our local Government are not worth mentioning. We submit our monthly returns to the above institute therefore, it will be worth our trouble if any defects in the working and are pointed out whenever found. The free (or on nominal charges) Technical service should be rendered to the individual factories on requisition. The reason for this research work carried by the Institute on byproducts of the industries is not keeping pace with the phenomenal progress of the industry. The new lines should be pointed out to the factories by these departments in order to lower the cost of production and starting of allied industries so that the labour should remain engaged throughout the year.

10. The cultivation of sugarcane is carried only on experimental basis. We tried our best to purchase land or obtain it on lease for extensive cultivation but could not succeed. The difficulties which we encountered are that the free land is not available in the locality and the land which is procurable is occupied by numerous statutory tenants having permanent or life interests and thus they cannot be ejected. The landlords and the tenants are not prepared to lease out their land to the sugar factories on prevailing rates. The Government is also not prepared to lend any helping hand in acquiring the land or obtaining it on lease.

11. (*a*) Total area held 20 acres.

(*b*) In season 1935-36 5 acres, and in season 1936-37 10 acres.

(*c*) In season 1935-36 only Co. 213 and in season 1936-37 Co. 213 and 312. 312.

(*d*) Local system.

(*e*) In season 1935-36 100 maunds per acre and in season 1936-37 504 maunds per acre.

(*f*) Not available.

12. We have contributed to the Government scheme for development and improvement of cane cultivation.

13. Personally we have not tried early and late varieties of cane. The Agricultural Department of the province has not rendered any assistance worth mentioning. The Agricultural Department started a demonstration about few miles from our Factory but I understand that the results obtained are hopeless.

14. (*a*) From year 1933-34 to 1935-36 the quantity of cane available was insufficient to the factories' requirements and only in the year 1936-37 the supply at outstations was little in excess to their demands.

(*b*) There is no improvement in the quality of cane during these four years as is evident from the following cane analysis of the seasons:—

Mixed Juice.

	1933-34.	1934-35.	1935-36.	1936-37.
Brix	17·65	14·52	16·51	16·36
Pol	13·90	10·65	12·78	12·17
Purity	78·75	73·35	77·41	78·68

15. In our locality the cane is liable to damage from severe frost to the extent of 90 per cent. and 40 per cent. by insects pests. In the normal years five to seven per cent. is liable to damage by diseases.

16. The supply of cane is in abundance, but cannot be said of comprising of suitable cane. The varieties of Co. 213, 312, 244, 290 and 331 are available, but the bulk is of 213 and 244. The field yields are as under:—

Varieties.	Yield per acre. Mds.
Co. 213	400
Co. 244	350
Co. 312	600
Co. 331	300

17. As soon as the purchases are started by the different factories on the adjoining sations the supplies at the gate of the factories get diverted forming basis of competition, but it is mostly governed by the economic law of demand and supply. In the year 1933-34 and 1934-35 about half of the entire supply was effected but in season 1935-36 about 25 per cent. was purchased at unremunerative rates. In season 1936-37 the competition was more or less eliminated. The prices of cane in season 1933-34 rose as high as 9 annas per maund, while in season 1934-35 and 1935-36 up to 8 annas per maund.

18. (*a*) The area under cultivation in our locality has been subject to considerable variation.

(*b*) the field yield of sugarcane crop is far better than any other crop. The local climate is specially suited for cane cultivation. It is the most paying crop as compared to others as it is advantageous to sell cane than to form Gur or jaggery which do not sell so readily. The other alternative cash crops even do not compare with this produce.

19. The production of sugarcane is not in excess of our requirement in our locality, but the restrictions should be imposed on outstations where the cultivators wait for months in vain to sell their cane.

20. Not available.

21. The main difficulties of the cane-growers in the cultivation of cane and its delivery to the factory are:—

(1) Lack of metalled roads and even of Kacha feeder roads.

(2) Degenerated live-stock.

(3) Small holdings which prevent them in sowing it in rotation.

(4) Lack of proper manure and credit.

(5) Uneconomic water rates, specially of Government Tube Wells.

(6) The District authorities should take a keen interest in making and maintaining feeder roads. Special grants for this purpose should be allotted. The scheme for rural credit as sponsored by the Reserve Bank and the Royal Agricultural Commission should be given effect to.

22. (*a*) We think that the acquisition of land for cultivation purposes of a factory should be left to voluntary negotiations but if it is envisaged that the industry should compete in home and foreign markets with other countries, then the compulsory acquisitions or leasing of lands for cultivation of cane should be resorted by the Government if so requested.

(*b*) The zoning is of importance in the Western United Provinces where owing to a large growth of new factories conditions have altered, since the date of last Tariff Board Report. The passing of Act XV of 1934, fixing a minimum price of cane and the fact that no insuperable administerative difficulties have been experienced have moved the main objections to zoning from the ryots points of view. In our opinion it should be desirable both with a view to remove uneconomic competition for cane and to establish more intimate relations between the factory-owners and ryots to introduce the system of zoning but this should be restricted to gate cane and adjoining stations. The working of the system should be entrusted to a committee consisting of all the factory-owners in the zone, to ryots representative and a Government official. The committee should meet every year and define zones either by allotting a separate blocks of fields to individual factories or defining centres of purchase of cane at which there should be no competition between factory and factory. Such a committee should act without undue rigidity and would be alive to any change in economic and crop conditions which required alterations in zones.

23. The development of feeder roads is the legitimate function of Local Boards. As regards advances of cash or supply of seeds and manure, we have contributed to the Government scheme for development. Such advances should continue to be purely voluntary. It is suggested that if summary process were provided for recovery of these advances, the extension of the voluntary system would be facilitated.

24. (*a*) At present there is no need for fixing a quota but the need may arise in the near future.

(*b*) All new factories and extension of existing factories should be subject to license. The licensing should be entrusted not to provinces but to an All-India body. As the maintenance of fair prices for cane has been accomplished by Act XV of 1934.

25. The following is the proportion of gate and rail cane in different seasons:—

	1933-34.	1934-35.	1935-36.	1936-37.
Rail . . .	5	6	8	4
Gate . . .	6	8	7	17

The variation is due to increase of cultivation of sugarcane in the locality.

26. By carts. Average weight per cart is 21 maunds. Rubber Tyred carts cannot be used for lack of feeder roads, culverts, etc.

27. The mileage of roads in our vicinity cannot be said adequate. There is only one main road which is of kankar but is fairly worthy of transportation. The feeder roads are almost sandy and frequently interrupted, having no culverts on water courses.

28. The cane is brought by road from a distance of seven to eight miles and it takes from 12 to 24 hours from the time of cutting to the time of delivery at Factory. There is almost no deterioration during road transport.

29. Cane-growers employ their own carts, the average cost of hiring carts is 1 to 1¼ pie per mile.

30. At certain outstations such as Chandpur Siau toll is levied on carts supplying cane, but at our factory gate there are no tolls or other dues collected.

31. All the cane available in the locality is registered and then the whole area is divided into blocks and then indents are given to ensure regular and prompt supply of gate cane. The normal period of detention of a cart at our factory is from 2 to 4 hours. No cane is accepted which is not registered and brought on our requisition which ensures speedy release of carts.

32. Generally within 35 miles and sometimes from 36 to 76 miles. The average time taken between cutting of cane and delivery at factory by Rail is three days and sometimes it is four days. As compared to efficiency and speed of Railway transportation, the arrangement for transportation of cane can be said satisfactory.

33. A Railway freights are based on full wagon load per four-wheeled wagon. We prefer the flat rate.

34. No.

35. There is no tramway.

36. There is no doubt that the tramway system is advantageous to the factories to accelerate speed and efficiency. The special difficulty is that the land cannot be acquired without executive action or legislation.

37. If the cane is detained (*i.e.*, not crushed between 30 and 90 hours after harvesting) the purity is effected by 3 to 4 degrees approximately.

38. The following is the proportion of the cane purchases:—

	1933-34.	1934-35.	1935-36	1936-37.
Direct from cane-growers . .	4	7	7	17
Through cultivators or agents .	7	7	3	3

39. The cane is registered but no cash advances are made as we have contributed to the Government Development Scheme.

40. Where the cane is purchased through contractors or Agents, we pay 3 pies per maund as commission, but the efforts are being made to eliminate them.

41. The arrangement has been made from season 1936-37 to purchase cane from Cane Development Society and 3 pies per maund is paid on their supply as commission.

42. The cane is weighed on cart-weigh bridges with bullocks, and then after emptying the carts the tare is noted with bullocks for speedy release of carts. The payment is made just after delivery of cane and the interval between delivery of cane and payment is only of 15 to 30 minutes.

43. The following are the average prices at which the cane was purchased during the last four years:—

	As.	P.		As.	P.
1933-34 . . .	6	5·37	1935-36 . . .	5	11·08
1934-35 . . .	6	2·29	1936-37 . . .	4	6·7

The prices begin to vary from February onwards but are fairly stationary in the beginning.

44. There is no definite relation between the price of sugarcane and sugar and the prices of sugarcane are regulated by the Government.

45. As long as the Gur prices are in the vicinity of Rs. 2 to Rs. 2-8 the ryots prefer to sell their cane to the factory, but any fluctuation beyond this seriously tells upon the cane supply in Western India.

46. Yes. There have been considerable variations in the prices of Gur. In the year 1933-34, it was from Re. 1-4 to Re.1-8 per maund—in year 1934-35 from Rs. 2 to Rs. 4-8 and in 1935-36 from Rs. 2 to Rs. 4 and this year it was from Rs. 2 to Rs. 2-8. The causes of variation are that the people have begun to sell their cane to factories instead of making Gur which raises the price, etc., etc.

47. Only this year the prices paid for sugarcane were prescribed by Government, but in the last three years the purchase rate was in excess of the minimum price fixed by the Government. The prices paid are as given in paragraph 43.

48. The existing formula for fixing the price of cane is unsatisfactory. The formula results in a vicious circle a fall in price of sugar leads to a fall in the price of sugar and so the process goes on. A fortnightly revision of the prices creates undesirbale, uncertainty both in the minds of ryots and of the factory owners whose stocks of sugar produced from cane bought at higher price deteriorate in price when the cane prices subsequently lowered. The price of cane should be disconnected from the price of sugar and should it is suggested be fixed on the cost of production of cane as ascertained by the Tariff Board in its present enquiries. It is necessary

that the price should be uniform for all provinces and specially for both the United Provinces and Bihar and the price once fixed at the commencement of the crushing season should be maintained for the whole of that season.

49. No system of bonus can be devised unless there is a certainty of regular supply of cane by the ryots and there are no chances of competition.

50. The duration in season 1933-34—106 days, 1934-35—128 days, 1935-36—141 and 1936-37—180 days.

The working season should extend over a period of at least eight months for economical running.

51. It is possible to extend the crushing season if early and late variety is rich enough in its sugar contents.

52. Yes. We are satisfied with the assistance given by the Imperial Council of Agricultural Research, but the help rendered by the Agricultural and Co-operative Departments is nominal.

53. The number of skilled and unskilled employed is as under:—

	Skilled.	Unskilled.
In the crushing season 1936-37 . .	280	366
In Off-Season 1936-37	50	58

54. The half of the skilled labour is imported from other parts of India.

55. Suitable accommodation is provided for housing the labour and free medical aid, recreation and sanitary conditions are provided for welfare.

56. One chief chemist and three Javanese Pan-men were used to be imported from abroad, now they have been replaced by Indian labour.

57. We cannot meet our requirements of fuel from the bagasse available in our factory.

The following quantities of fuel were burnt during the last four years and the prices are noted against each:—

		1933-34.	1934-35.	1935-36.	1936-37.
Quantity of fuel wood .	Mds.	27,233	45,614	35,761	44,676
Price of fuel wood . .	Rs.	5,740	11,403	9,816	12,449

58. No by-product is produced in our factory.

59. The outturns and prices of molasses for the last four years are given below:—

		1933-34.	1934-35.	1935-36.	1936-37.
Quantity	Mds.	49,768	71,761	74,052	90,918
Price	Rs.	2,650	3,414	5,130	5,000

60. There is no market for molasses and arrangements for transportation by Railway are highly inadequate as tank wagons are not supplied for foreign Railways and to meet the requirements.

61. We had been selling the molasses at very nominal prices, but this year we shall be required to throw it somewhere to clear the tank. For the utilization of molasses pure alcohol, mythelated-spirit, spiritual drugs and chemicals can be made and the Government should pass legislation for the compulsory adulteration of petrol by spirit. Free licenses may be granted to Factory-owners for preparation of spiritual drugs, etc.

62 & 63. No.

64. The stock position of sugar at the beginning and end of each crushing season for the last four years is as under:—

	1933-34.	1934-35.	1935-36.	1936-37.
	Bags.	Bags.	Bags.	Bags.
At the beginning of season . . .	*Nil.*	*Nil.*	*Nil.*	277
At the end of season	691	25,045	33,664	31,787

65. The sugar godowns on scientific lines have been built to prevent deterioration of sugar and the capacity is 35,000 bags. In the last 3 years the capacity was 15,000, but this year we have added another godown thus making the above total capacity.

66. The sugar, which is left after the monsoon, gets deteriorated and the causes of deterioration or damage are the exposure to moisture and contact with walls and floors of the godowns. The low grade of sugar is more likely to deteriorate by keeping.

67. The damaged sugar is sold at cheaper rates.

68. To a little extent, as Indian sugar is far better these days than it used to be.

69. It cannot be exactly answered but the damage caused in transit is due to rough handling and transhipping by the Railway and long exposures to air in the rainy season.

70. The Railways cannot meet the full requirements of the factories specially when there is a shortage of wagons for coal supply, such as in the months of January, February, and March. This causes delay in the delivery of sugar in the markets.

71. No.

72. The average prices of sugar sold in up-country centres during last four years is as under:—

	Rs.	A.		Rs.	A.
1933-34 . . .	9	2	1935-36 . . .	8	8
1934-35 . . .	8	11	1936-37 . . .	6	4

The freight rates are as follows:—

Name of Stations.	Rate of freight per maund.			Name of Stations.	Rate of freight per maund.		
	Rs.	A.	P.		Rs.	A.	P.
Meerut . . .	0	2	0	Kohat Cantt. .	1	6	11
Delhi . . .	0	2	7	Montgomery .	0	14	11
Jullundur City .	0	9	11	Lyallpur . .	1	0	0
Amritsar . .	0	11	3	Multan City .	1	2	6
Rawalpindi . .	1	3	1	Quetta . .	1	3	5
Peshawar City .	1	6	9	Sialkot . .	0	14	7
Bannu . . .	1	10	3	Lahore . . .	0	12	9

73. The copies of balance sheets are enclosed herewith from 1933-34 to 1935-36.*

74. The following amounts were written off for depreciation. The rates are same as allowed by the Income-tax Department:—

	Rs.		Rs.
1933-34 . . .	64,317	1935-36 . . .	68,713
1934-35 . . .	65,891	1936-37 . . .	70,000 (Approx.)

75. No. As there was not any surplus and in one year there was a nett loss.

76. Dividend was only declared in 1936 and Rs. 1,50,000 were divided amongst share-holders for the pears 1933-34, 1934-35 and 1935-36.

77. Working capital borrowed from the Bank in cash credit account.

In the years 1933-34, 1934-35 and 1935-36 at Rs. 5 per cent.

In the year 1936-37 at Rs. 4 per cent.

78. We have no Managing Agents.

Head office expenses are as under:—

	Rs.		Rs.
1933-34 . . .	9,686	1935-36 . .	10,480
1934-35 . . .	9,835	1936-37 . . .	10,500 (Approx.)

79. 12 per cent. on the original Block account (without allowance for subsequent writings off for depreciation) would be a fair return. The reasons for this view are:—

(1) That in the years when new factories were started in large numbers money was procurable at high rates of interest and the share-holders had to sacrifice high yields from Government securities to invest in this nascent industry.

(2) The industry is a young industry and both in the interest of the factory and provision for labour welfare reserves have to be built up. From 12 per cent., 5 per cent. will have to be put aside for the reserve fund and the actual dividend to the share-holders would only be 7 per cent.

(3) Provision has to be made against running risks, break down of machinery and so forth.

80 Forms* have been already submitted.

81. (1) & (2) Nothing.

(3) To overhead charges have been reduced to a considerable extent as is evident from the Form 11 submitted and this is due to economising in every branch of the factory.

82. There is no further room for reduction of work cost as long, as the present level of prices of raw material is prevailing. The improvement in recovery is possible if better quality of cane is introduced.

83. The principal marketing centre in which we deal are Delhi, Amritsar, Rawalpindi, Peshawar, Sialkot, Lyallpur, Bannu, Kohat and Multan, etc.

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*Not printed.

84. The usual arrangements are that the Agents and Sub-Agents are appointed by the Factory to sell their sugar to the dealers and then the dealers sell to retailers.

85. The sugar contract forms devised by the Indian Sugar Mills Association is suitable in our opinion.

86. Not available.

87. The experience shows that there is no wide fluctuation between wholesale and retail prices.

88. The storage arrangements of the dealers are not satisfactory, therefore, they are shy to commit themselves for bigger quantities.

89. The best quality of Indian sugar is as good as the best imported foreign sugar in keeping qualities.

90. Java sugar is preferred in Hotels and restaurants run in the European style for their customers—Europeans and Europeanised Indians. But even here high grade Indian sugars are replacing Java Sugars. To a very small extent, in the preparation of some special Indian sweets where customers like a bright white colour Java sugar is used.

91. Please refer to answer 89.

92. Not available. Carrying of stocks is financed by Banks and private bankers on the cash credit basis.

93. A marketing survey would be of advantage as it is an essential preliminary to the operation of a central marketing organisation.

94. Yes. We are in favour of All-India Central Organisation.

95. We are in favour of standardization as it is an essential preliminary to the operation of a central sales organisation. Experience was not available when standard were tentatively suggested and factories were not able to adopt them. We had, therefore, to do business on the basis of samples of our Factory.

96. (*a*) No actual business has been done in the basis of these standards.

(*b*) We have used the standards for grading our sugar. The business could not be transacted as buyers, merchants and dealers do not possess a set of them.

97. A material reduction in the price of the standard may tend to popularize them.

98. The time is not yet ripe for the establishment of a "futures" or "terminal" markets. Future markets are difficult to control. No amount of rules will secure it as the working will depend on the men and not on the rules.

99. This may be estimated at a million and one hundred thousand tons. Considering that the consumption of white sugar is only 7 lbs. per head as against 100 lbs. in Western Europe, the United States and Australia and that there has been a large increase. In world consumption in recent years, there do seem to be possibilities of increasing the consumption. The present low prices are another factor in favour of an extension.

100. It is not possible to say to what extent factory sugar is replacing Gur as judging from statistics both industries are expanding.

In the sweetmeat trade, however, it is a matter of common knowledge, that while for certain sweets Gur is still preferred, the substitution of sugar for Gur has gone far. It is impossible to make an estimate of this substitution.

101. No useful information can be given.

102. Information is not available.

103. In 1934 Java landed her sugar in India at unremunerated prices. The fact will be clear from the following statement of prices ex-duty of Java sugar c.i.f. Calcutta:—

Date.	Price in Indian Currency per maund. Rs.	A.	P.
1933—			
January to March .	3	12	2
April . . .	3	12	5¾
May . . .	3	10	7
June . . .	3	13	6
July . . .	3	13	0
August and September . . .	3	11	6
October . . .	3	10	6½
November . .	3	9	1¼
December . .	3	4	1
1934—			
January . .	3	1	8
February . .	3	6	1
March and April 1st to 24th . .	3	5	1
April 25th to 3rd May . . .	3	3	1½
1934—contd.			
May 4th to 10th .	3	1	9
May 11th to 28th .	3	1	3¾
May 29th to 21st June . . .	2	15	4½
July 9th to 16th .	2	15	10¼
July 17th to 30th .	3	0	9¾
July 31st to 9th August . .	3	0	4
August 10th to 20th	3	1	3¾
August 21st to 26th September . .	3	0	4
September 27th to 6th October .	2	13	4¾
October 7th to 10th	2	12	1
October 11th to 27th	2	13	4¾
October 29th . .	2	11	6
November 13th .	2	9	9
November 14th .	2	9	3

The last Tariff Board considered that under normal conditions the price of Java sugar landed in Calcutta would be Rs. 4 per maund ex-duty, but in circumstances of exceptional competition or for special reason, Java manufactures might go down to as low as Rs. 3-4 per maund. At the time Java was suffering from large accumulated stocks of unsold sugar.

The facts were brought at the time to the notice of the Government of India by a deputation from the Indian Sugar Mills Association which met the Hon'ble Members concerned an 24th November 1934.

104. In our opinion facilities should be offered for exports of Indian sugar to the United Kingdom by admitting it at certificated colonial rates (1*s.* 5·3*d.*) exports will become possible when Indian price *plus* freight *plus* this preferential rate is equal to or lower than the price of non-Indian sugar landed in England after paying the regular customs duty. India, at the moment, does not make sugar of 96 polarisation for it.

Indian sugar is about 99 polarisation.

The Neoli Sugar Factory, Etah.

Replies to general questionnaire.

1. Production of sugar in 1933 600 tons.
2. Production of sugar in—

	Mds.
1933-34	48,788
1934-35	124,085
1935-36	242,593½
1936-37	240,680

3. (*a*) Yes.

(*b*) Yes, with the exception of road communications—except the provincial *pakka* road practically there is no road in this vicinity.

(*c*) Yes.

4. *Double Sulphitation*—both the sulphitation process plant as well as the process itself is cheaper but yields lower recovery and produces comparatively inferior quality of sugar. On the other hand carbonitation process yields a higher recovery and produces a better quality of sugar and is also positive in its action. The use of lime-stone raises the cost of sugar manufacture by this process.

5. A few pumps, engines, vessels and centrifugals have been added, duplicated and changed. The amount spent over all these comes to Rs. 99,147-6-4.

6. A few pumps and vessels, etc., are being added and rollers are being replaced.

7. (*a*) The availability of raw materials especially of cane in respect of its quality and quantity at a reasonable price in the neighbourhood and the facility of access or markets.

(*b*) 500 tons.

8. Centrifugals and simple parts such as cast iron tanks and pipes, etc., are obtainable in India.

9. (i) & (ii) No.

Raw Materials.

10. Yes we purchased land for sugarcane cultivation outright.

11. (*a*) About 725 acres.

(*b*) 250 acres.

(*c*) Co. 210, Co. 213, Co. 214, Co. 244, Co. 385, Co. 290, Co. 299, Co. 300, Co. 301, Co. 312, Co. 313, Co. 331, Co. 341, Co. 349, Co. 350, Co. 385, POJ. 2878 and COS. 5.

Many of these are on experimental scale.

(*d*) Both by improved and country old systems. Fallows and rotation are applied but not very strictly. Green and farm yard manure as well as cakes are used.

(*e*) As stated above 11 (*c*) most of these varieties were sown in very small plots of land on experimental scale which exhausted in experiments and therefore yield per acre could not be known. Most of the product of other varieties was either distributed for seed or was resown in our own farm and therefore the weight per acre of these varieties could not be ascertained.

(*f*) Same as above 11 (*c*).

12. (*a*) About 10 acres.

(*b*) Nothing separately.

13. Experiments conducted in respect of early and late varieties have not been very successful. The commonly recommended late variety (Co. 331) did not yield any encouraging results after middle of April. On 15th April 1937 purity and brix being 88·42 and 19·95 and again on 6th May 1937 59·33 and 13·03 respectively. The early varieties like Co. 350 have not shown any success either. Purity and sucrose on 3rd November 1396 being 78·4 and 17·22 respectively whereas the results of very common variety of Co. 213 have been better by far in respect of early ripening. The purity and sucrose on 3rd November 1936 being 86·1 and 18·38.

Our experience shows that the results vary from field to field and in some cases even cane to cane and the selection of late and early variety require a good deal of research.

The help from Agricultural Department has been very little.

14. (*a*) The quantity of cane has increased from year to year especially on our gate—although we got lesser quantity of rail cane this season. Figures are given below:—

	Gate Cane.		Rail Cane.		TOTAL.	
	Mds.	srs.	Mds.	srs.	Mds.	srs.
1933-34 . .	235,325	10	393,467	0	628,792	10
1934-35 . .	709,704	30	916,625	10	1,626,330	0
1935-36 . .	865,553	20	2,015,971	0	2,881,524	20
1936-37 . .	1,158,743	25	1,527,595	10	2,686,338	35

(*b*) Quality has also been improving from year to year due to intense propaganda from our side. Due to frost and unfavourable monsoons there has been severe damage to the crop during the seasons 1934-35 and 1936-37.

15. The entire cane crop is liable to damage from frost, disease or insect pest as was experienced in the season 1934-35 when practically the whole crop was affected by frost in this area.

16. Yes. Mostly Co. 205, and Co. 213 and also Co. 290, Co. 312, Co. 313. The yield of cane has been about 200 mds. per acre. The average sucrose content in cane for each season is given below:—

1933-34 . . .	11·12	1935-36 . .	10·97
1934-35 . . .	9·98	1936-37 . . .	11·14

17. On one side of our rail cane, *i.e.*, between Bareilly and Manpore Nagaria there has been some competition from the Baheri and Pilibhit factories although they have got more than sufficient cane within their own limits. This season there has been a regular purchase on all the stations between Bareilly Junction and Manpore Nagaria with the exception of Kachla Ghat during the whole season on behalf of the Bareilly factory, as a result of which we ran short of cane about a month earlier.

18. (*a*) At gate not much—at stations there has been considerable increases.

(*b*) (i) The area under cane cultivation around our gate has not increased to a very great extent on account of no sources of irrigation although the varieties of cane have been improving year to year due to our discouraging the indigenous varieties. The climatic conditions of this locality, is such that it needs compulsory irrigation during the hot months of May and June as also after winters to retain the crop for longer period. For the last few years we have been experiencing that the rainfall in this locality is either in excess or defective which cause much harm to the cane crop. The area around railway stations from where we have been having our cane supplies has been considerably increasing every year where there is every facility of irrigation either by means of canals or Hydro-electric tube-wells.

(ii) The constantly downfall in the sugar prices is the other cause of discouragement to the poor growers who cannot get reasonable prices for their cane.

(iii) We have not experienced any effect on account of this during the last few years.

(iv) As above 18 (*b*) (iii).

19. It is not so in this area—nor any restriction is necessary. Law of supply and demand is sure to automatically adjust everything.

20. Not available.

21. Means of irrigation and means of transportation. The cultivator having no capital is absolutely helpless in this respect and has to depend

entirely upon the monsoons. On account of there being no roads around this area the cultivator has also to face another difficulty in transportation of his cane from the field to the factory. Bullocks cannot carry on such bad *Kacha* roads sufficient quantity of cane loaded in the cart which increases the cost of transportation to the cultivator.

22. (*a*) We would urge most emphatically the desirability of Government aid in the matter of acquisition of land acreage being in respect of the capacity of each factory.

(*b*) As above—in our opinion there cannot be any other alternative suggestion.

23. We are prepared to give assistance to the cultivators in the form of distribution of seed and manure at cost prices which we have been doing from the very start of this factory. It is not safe to advance them cash because our experience proves that any advance of cash made to them also loses the cane to the factory. The tendency of the cultivator is to take advance on his cane by some other means either to sell it to Khandsaries or to make gur for himself. Even after a zoning system were introduced the advance of cash would not prove helpful because no one can prevent the cultivator from making gur out of his own cane and thereby evading payment of the loan to the factory.

The development of feeder road is the legitimate function of the Local Board.

24. (*a*) & (*b*) (i) & (ii) Yes.

25. (*a*) Gate Cane:—

	Per cent.
1933-34	37
1934-35	43
1935-36	30
1936-37	43

(*b*) Rail Cane:—

1933-34	63
1934-35	57
1935-36	70
1936-37	57

(*c*) *Nil.*

Supply of gate cane has increased to some extent on account of the gradual developments of the area but more because of paying fancy prices direct to the growers—there being no middleman.

26. Our gate cane has exclusively been transported by ordinary carts with the exception of our farm cane which has been transported by pneumatic wheeled carts. The average cane carried by ordinary carts works out to somewhere about 35 maunds per cart. The pneumatic wheeled carts carry about 50 maunds per cart but its capital cost is so high that there is very little likelihood of its getting popular among the cultivators. We are now contemplating conducting experiments with Ball Bearing wheels on the indigenous wooden wheeled carts and hope to be successful to a very great extent.

27. There is only one provincial road running on one side of the factory the mileage of which is not inadequate but the general condition of this road is not satisfactory at all; whereas the local so-called *Kacha* roads are in a hopeless state and cause considerable inconvenience to the cane traffic.

28. We get cane at our gate from with 20 miles and within 24 hours.

There is no appreciable deterioration during these 24 hours.

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29. The actual cost of cane brought by the cultivators in their own carts cannot be known. The rough estimate comes to about one pie per mile. The average cost of cane transported by hired carts works out to about 2 pies per maund per mile in this area.

30. The cane carts of the best locality at gate have to cross Ganges through a pontoon bridge where the schedule rate of toll tax is 4 annas 6 pies for each laden and 2 annas 3 pies for each empty cart. There is no other toll levied on gate cane. A number of municipalities have been charging toll tax on the cane brought at our railway station purchasing centres which merely pass through their limits. Many times this has been brought to their notice that the law does not contemplate assessment of tax on commodities that are not consumed within the municipal limits and also that no tax can be collected on exciseable commodities and the material of their manufacture such as opium, sugarcane, etc., but to no effect and as a consequence of which the supplies of cane could not increase at these centres in spite of our best efforts. We now feel obliged to file suits against these municipalities in the interest of the industry as well as the growers.

31. From the very beginning we have introduced a very elaborate system to ensure regular and uniform and continuous supplies of gate cane. We have divided the gate area into several circles, each in the charge of a Halquadar. These Halquadars have to distribute indents among the cane cultivators—one indent for each cart. The cane can only be harvested after the indents are received by the growers as otherwise his cane will not be accepted by the factory. In this way the number of carts as well as the undue detention is successfully controlled.

Detention of carts is usually not more than 8 hours or so but on some exceptional occasions during the very busy days of the season when carts come to the gate in large numbers altogether at a time the detention period increases.

We are making every effort to make the above-mentioned Halquadari system more and more effective, efficient and successful gradually.

32. We get rail cane generally from distances 13 miles to 65 miles and occasionally at the time of shortage from farther distances even.

We generally get rail cane at the factory within 48 hours of its being cut at the fields.

We have got satisfactory railway arrangements for transport of cane.

33. We are getting cane through two railways, *i.e.*, Rohilkhand and Kumaon, and Bombay, Baroda and Central India. Railway freights are calculated on flat per wagon basis.

Bombay, Baroda and Central India Railway has made some reduction last season in railway freight in respect of capacity of wagons.

No.

34. No.

35. None.

Does not arise.

Does not arise.

36. No.

37. There is practically no deterioration in the cane received by road but we get approximately 5 per cent. sugar less from rail borne cane on account of deterioration of cane in transit.

38. (*a*) All the gate cane which varies 30 to 40 per cent. of the total cane crushed every year.

(*b*) All rail cane is purchased through commission agents and not contractors. These agents purchase cane direct from the growers and pay for it direct to them. The percentage of this cane varies 60 to 70 per cent. in different years.

39. We make ready cash purchases and do not enter into any previous arrangements with the cultivators whatsoever and make no advance in cash. We do provide seed and manure to some deserving tenants at cost prices.

We give them instruction to adopt improved methods of agriculture and sow improved varieties and give them practical demonstrations at our Farm.

40. We pay at the rate of something about 6 pies per maund to Commission Agents which includes handling charges, station expenses and dryage and is payable on weights recorded at the factory weigh-bridge. Railway freight is paid by the factory.

41. No.

42. We have five weigh-bridge working for 24 hours and a wagon weighbridge fitted in our side for the rail cane. At some out-stations we have weigh-bridges while at other scales and weights (Taks).

Generally payment is made very promptly just on the demand of the cane vendor but at some out-stations it is made weekly on the authority of sanction granted by the District Magistrate. In spite of our best efforts for prompt payments we have experienced that in certain cases cultivators do not demand payment for as long as several weeks and let the money accumulate with us for reasons best known to them.

43. The average price of cane for all the four seasons is given separately below:—

	Per maund.	
	As.	P.
1933-34	5	0
1934-35	5	5
1935-36	5	1·3
1936-37	5	0·8

We have always tried to pay gradually rising rates at different periods of the season at the gate in order to encourage the cultivator to retain the crop for longer period in spite of the fact that the Government prices started with higher rates at the start of the season and then came down gradually according to the market rate of sugar. During the last two seasons (1935-36 and 1936-37) we could only maintain the price at which we started purchase in the beginning of the season on account of the prices of sugar getting lower and lower. We could not of course maintain our scheme for the indigenous variety of Sainta in order to discourage the sowing of this variety which is also being discouraged by the Government of United Provinces by reducing its rate by one anna per maund for certain Tehsils in our locality.

44. Yes.

45. To a very great extent.

46. Yes. The steady and consistent downward movement in the prices of sugar has also brought down the gur prices. We believe there is overproduction of both sugar and gur.

47. We have always paid prices at gate in excess of the prices fixed under the United Provinces Sugarcane Act. In general we have paid from 3 pies to one anna higher than the minimum Government price and sometimes higher before the last two seasons when the prices of sugar were favourable in order to encourage cane cultivation around the factory and to divert to our factory from the Khandsaries and gur manufacturing.

48. No. Far from it. The whole thing is unnatural. It is against the law of supply and demand. If the minimum price for sugarcane were at all to be fixed it should have been fixed on the basis of the cost of production of cane cultivation and not on the basis of the prices of sugar. The prices of the commodity should depend on the cost of its own production. The cane cultivator should have nothing to do with the prices of sugar. The greatest defect in the present system of fixation of cane prices under the sugarcane rules is to fix a certain higher rate in the beginning of the season profresses, causes not only discouragement to the cane-growers but dissatisfaction and uncertainty to manufacturers also.

49. The superior early and late varieties of cane have not proved very successful in our experience. On the 15th April, the famous late ripening variety Co. 331 did not prove to be a great success. Even Co. 312 proved slightly better (Co. 312, 88 purity and Co. 331, 86) and the early variety like Co. 350 (the much acclaimed early variety) has not given very satisfactory results. In some cases even Co. 213 has ripened earlier than Co. 315. Our results vary from field to field and therefore, no bonus is recommended.

The introduction of the bonus system for special varieties would have more difficulties in practical working also. The identification of the different varieties of cane would have to be left to the weighment clerks and disputes arising out of the identity of the cane becomes far more numerous.

50. Following is the duration of our seasons from year to year :—

	Days.		Days.
1933-34 . . .	93	1935-36 . . .	175
1934-35 . . .	146	1936-37 . . .	141

In the first year we started factory late and therefore could not get sufficient cane. In the second year we got comparatively more cane but not to our full requirement because we could not gain the full confidence of the growers to retain their cane for longer period who were used to sell their cane to the Khandsaries or were making gur themselves and finished their cane early as usual. The frost also played its part to a very great extent in finishing the cane early. During the last season (1936-37) we could not also get cane after the end of March to our full requirement and had to close the factory earlier for the first week of April because the heavy rains had effected very much the cane cultivation in this locality which is surrounded by several rivers.

About seven months would be sufficiently long period for economic working.

51. The so-called early and late ripening varieties have not proved any success so far as our experience goes and therefore there does not appear any possibility of extending the usual duration of crushing season.

52. No.

Labour.

53. The figures are not available at present because there is a general holiday in the factory for the whole month of June and as such the Time Office is also close.

54. With the exception of one English Chief Engineer all staff is Indian. Amongst the Indians they represent almost all parts of India, such as, Punjab, Bengal Bihar, etc.

55. None.

56. Free residential quarters are furnished to all section of labours and there is a factory club for those who care to join it.

Power.

57. We give below the figures of weights and amounts of the fuels (coal and firewood) separately for each year:—

	Quantity.		Amount.		
	Mds.	Srs.	Rs.	A.	P.
Coal—					
1933-34	22,062	10	10,024	10	7
1934-35	10,501	10	8,204	1	6
1935-36	2,110	10	1,209	0	9
1936-37	391	35	195	7	3
Firewood—					
1933-34	14,581	0	5,467	14	0
1934-35	24,707	0	6,562	12	0
1935-36	15,295	20	3,823	12	0
1936-37	19,687	0	3,273	5	10

We had never any surplus bagasse to bale.

By-products.

58. Molasses.

59. The following are the figures of the outturn of molasses:—

	Mds.	Srs.	Rs.	A.	P.
1933-34	Not known.		818	3	0
1934-35	74,592	0	3,005	13	0
1935-36	133,177	12	12,032	9	9
1936-37	100,853	26	4,512 (up to April, 1937)	13	3

The quantities of molasses have varied year to year according to the variation in the quantities of the cane crushed and the difference in contents of cane in the different years.

60. We send nearly all our molasses in the Ahmadabad, Agra, Muttra and Hathras markets.

Most of the molasses is transported by rail. The Bombay, Baroda and Central India Railway has supplied four tank wagons for its transportation. Some quantity is also transported by bullock carts and lorry trucks to the nearer markets. The rates of freight for the principal markets are given below:—

	Per maund.	
	As.	P.
Ahmadabad	9	8
Agra Fort	3	0
Hathras City	2	4
Muttra Cantt.	2	10

61. We sell all our molasses and have very important suggestion to make in regard to the utilization of molasses. As has been urged by the Indian Sugar Mills Association on various occasions, power alcohol—which could easily be extracted from the molasses—should compulsorily under the law be made to form a constituent of commercial petrol. During the past, very strong vested interest have prevented the utilization of molasses in this direction. The suggestion is not new. Power alcohol in petrol has been tried in various countries in Europe and elsewhere and has proved to be an unqualified success. It is, therefore, absolutely essential that India, producing so much of molasses, should also take to this without any further delay.

Molasses could also be employed for fuel and cattle fodder, provided sufficient research data is available on the subject. Special drastic reduction in the freight rates would give an immense incentive to fodder manufacture.

Molasses could also be used for road building and for this also wide research and copious data is necessary.

62. We have had surplus bagasse but it appears that bagasse could profitably be employed for the manufacture of paper and straw-board. Experiments of manufacture of straw-board from bagasse made in the straw-board factory at Saharanpur have, we understand, met with abundant success and it appears that bagasse could profitably be sold to paper and straw-board manufacturers; but in the vicinity of this factory there is no such factory where it can be sold at any price and therefore it cannot be sold for this purpose at any price.

63. Does not arise.

Storage and transportation of sugar.

	Beginning of season.	End of season.
	Bags (2½ mds. each).	Bags (2½ mds. each).
1933-34	*Nil.*	1,495
1934-35	*Nil.*	15,736
1935-36	59	21,098
1936-37	2,262	28,335 bags (2½ mds. each).

65. We have two godowns with the capacity of 25,000 and 20,000 bags respectively. The smaller one was added last year.

No deterioration of sugar in storage has so far been observed to any appreciable extent. Only a few bags in the last layer of stacks got moistened on account of dampness during the rainy season.

67. The damaged sugar, the quantity of which is very negligible, is remelted and passed through the process again during the next season.

68. There is very little scope for improvement over our present conditions.

69. About one per cent. of the consignments get damaged due to rough handling in transit. We have also been receiving complaints from the buyers about shortage of sugar in certain bags of a consignment.

70. We have been experiencing considerable difficulties in obtaining wagons for the transportation of sugar specially during the working seasons. In the year 1935-36 we had to face great difficulty in this respect as the booking was closed for about a fortnight without previous notice.

71. No.

72. We have never sold any sugar except on f.o.r. factory station basis.

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The following are the freight rates to the markets we supply:—

	Rs.	A.	P.		Rs.	A.	P.
	Per Md.				Per Md.		
Belanganj . .	0	4	2	Dohad . .	1	0	2
Muttra Cantt. .	0	3	11	Farrukhabad .	0	4	2
Agra Fort . .	0	4	2	Kasganj City .	0	1	1
Elgin Club .	0	7	0	Jaipur . .	0	8	7
Indore . .	0	15	10	Khurja City .	0	4	4
Ujjain . .	0	14	8	Khandwa . .	1	0	10
Baroda . .	1	1	2	Aligarh . .	0	3	4
Ajmer . .	0	11	7	Ramganj Mandi	0	12	3
Mhow . .	1	0	0	Sanawad . .	1	0	6
Baran . .	0	12	6	Akola . .	1	6	10
Bhowani Mandi .	0	12	9	Kotah . .	0	10	10
Beawar . .	0	12	2				

Capital account and overhead charges.

73. Being enclosed herewith. This does not include our Head Office expenses.

74. None.

75. None—does not arise.

76. Interest paid to share-holders at 8 per cent.

77. Cash Credit Account against sugar stock, etc., at 4½ per cent.

78. Rs. 24,000 annually *plus* 5 annas per cent. on sugar sales *plus* 5 per cent. commission on the nett profit. These items include expenses of 2 factories, *viz.*, The Neoli Sugar Factory, P. O. Neoli (Etah) and The Saraswati Sugar Mills, Abdullapur (District Ambala) because both the factories are owned by the The Saraswati Sugar Syndicate Ltd., Lahore, and expenses at its office are incurred jointly for both the factories.

79. 9 per cent.

Efficiency of production.

80. Form* duly filled in and enclosed herewith.

81. (i), (ii), (iii) and (iv)—It is not possible to give any figure for these because there are also many other causes which affect the reduction in the costs of sugar manufacture. The main factors being quality of cane crushed, prices paid therefor and recovery of sugar obtained therefrom. We are however confident that there has been at least some reduction in the cost of manufacture due to the extension of our plant and efficient working on the most economical basis.

82. Very little.

Marketing.

83. (1) Belanganj.
(2) Muttra Cantt.
(3) Agra Fort.
(4) Elgin Club.
(5) Ujjain.
(6) Baroda.
(7) Ajmer.
(8) Mhow.
(9) Baran.
(10) Bhowani Mandi.
(11) Bewar.
(12) Dohad.
(13) Farrukhabad.
(14) Kasganj City.
(15) Jaipur.
(16) Khurja City.
(17) Khandwa.
(18) Aligarh.
(19) Ramganj Mandi.
(20) Sanawad.
(21) Akola.
(22) Kotah.

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* Not printed.

84. (*a*) Our products are sold to the dealers through Sole Agents on payments against R/R.

(*b*) Not known to us definitely.

85. Yes.

86. It is not possible to know both the wholesale and retail prices of both the Indian factory sugar and the imported sugar of the whole area covered by the distributing centres of different parties in different years. We can only give the approximate figures of wholesale sales only, the figures of which are given below:—

	Between						
	Rs.	A.	P.		Rs.	A.	P.
1933-34	9	5	6	and	8	1	0
1934-35	9	2	0	and	8	6	0
1935-36	8	15	0	and	7	8	0
1936-37	7	8	0	and	6	8	0

87. The retail prices always remain higher than wholesale prices. This is due to the dislocated condition of the market, as also due to the retailer purchasing sugar in small quantity.

88. There are godowns at all important sugar consuming centres. The deterioration, if any, is very negligible.

89. No.

The keeping quality of Indian sugar has maintained itself on a uniformally high level.

90. Java sugar is preferably used in restaurants and hotels for their European customers as well as in European and the so-called Europeanised Indian houses although they can get Indian sugar of the same quality at a lesser rate of Rs. 2 per maund.

91. Yes.

92. (*a*) and (*b*) This very much depends upon the tendency of the rise and fall of sugar prices and the law of supply and demand. When the dealer speculates rise in the sugar market he makes forward purchases to his fullest capacity and sometimes even takes delivery of the sugar stocks in his own godown while in most cases the deliveries are effected at due times; but since October 1935 due to the steeply downward movement of prices the dealer has begun to shudder stock any sugar and the manufacturer himself has to keep the stock for the most part of the year.

We usually get finance from banks against stock with a margin of 25 to 30 per cent. The godowns containing stocks of sugar remains under the charge of the bank representative.

93. Yes.

94. An absolute and unpostponable necessity for the very existence of the industry.

95. Yes.

96. (*a*) None. The standards are almost unknown in the sugar market. Due to the very high price of the box of standards it is outside the reach of the ordinary sugar dealer.

(*b*) We have not attempted.

97. They should be made more popular and cheaper.

98. "Futures" and "Terminal" markets would do a lot of good to Indian Sugar Trade but the time is not yet ripe for the establishment of such market. Future markets are difficult to control.

99. This may be estimated at a million and one hundred thousand tons. Understanding that there has been a larger increased in the world consumption in recent years, there do seem to be possibilities of increasing the consumption in India also. The present low prices are an important factor in favour of this.

100. It is not possible to give any definite idea about this because no figure in respect of this are available. Probably however it is a matter of common knowledge that in the sweetmeat trade the substitution of sugar for gur has gone far though for certain sweets gur is still preferred.

101. It is too early to say anything about it because during its short life the sugar industry has had no chance to indulge into any such side lines.

102. Unavailable.

103. We have nothing to say.

104. (*a*) Not known.

(*b*) Export of Indian sugar could be made possible if the Indian sugar were offered facilities of exports by admitting it at certificated colonial rates.

105. (i) It stunted the industry.

(ii) Has had the effect of industrial infanticide.

106. We sell our entire product to dealers.

107. Not to our knowledge. Have nothing to say.

Claim for protection.

108. More than what has been given in the form of protection has been taken away by the excise duty. In any case the industry would meet a catastrophic end in the fifth year of its existence if the protection were withdrawn even in part.

109 and 110. To a considerable extent, as stated above, the excise duty has effectively stood in the way of the industry standing on its own legs.

To a very much larger extent the responsibility for the slow progress of the industry towards that goal is due to utter lack of progress in the agricultural side of sugar production.

India has taken a long stride towards achieving manufacturing efficiency in these few years of protection. This progress can be compared to the progress of any other sugar producing country in the world in its infantile stages. We have at least touched the shoulders of the best sugar producing country in the world with our manufacturing efficiency.

But what is most appalling is, that the Agricultural part of sugar production does not come up to the knees of even the most inefficient sugar producing country outside India.

We do not grudge the sugar excise duty as such. If this duty were utilized towards putting the industry on a permanently sound basis by improving the agriculture of cane, we would in the very near future have declared ourselves capable of standing on our own legs out to compete with Java in an open market.

But the most regrettable part of the whole business is that the industry itself is not allowed to benefit by the Excise duty; and the deeply painful impression left on the miller is that the sugar industry is being made a milch-cow for other revenue purposes.

It is needless to recount here that the actual conditions prevailing today are incomparably pessimistic to what was contemplated by the previous Tariff Board.

Developing the agricultural side of the industry is in need of urgent and immediate attention from the Government.

It is a common saying in the sugar world that the cane agriculture has received a very step-motherly treatment at the hands of the Government. We have never tried ourselves of asserting that this agriculture has been completely motherless so far as the Government are concerned.

111. We have nothing to say.

Balrampur Sugar Co., Ltd., Tulsipur Factory, Gonda.

Production of Sugar.

1. The factory started manufacturing on 3rd December, 1936. The full capacity is 800 tons cane per day.

	Total Maunds of No. 1 Sugar.
2. Season, 1936-37	240,722·5

3. (*a*) The factory is advantageously situated as regards cane supplies, but not of the best quality cane as compared with the Bombay Presidency and the Deccan, but with regard to limestone the freight is very high amounting to approximately seven times the value of the stone. The same applies to coal and other stores but to a lesser degree.

(*b*) & (*c*) Yes.

4. *Double Sulphitation.*—The advantages and disadvantages of the respective processes are as follows:—

Sulphitation.—Lower capital cost, lower operative cost, more careful control required (less "foolproof") lower grade of sugar produced which is more susceptible to damage in unfavourable climatic conditions, lower yield varying from 2 per cent. with high purity juices to 4 per cent. with low purity juices.

Carbonitation.—Higher capital cost, higher operative cost, easier control (more "foolproof") superior sugar made, less liable to deterioration in the monsoon. Higher yield, from 2 to 4 per cent. dependent on purity of juices.

The additional capital cost for a factory milling 25,000 maunds per day is about £3,500 e.r.w. The critical factor in deciding the process is cost of limestone as laid down at factory; operative costs are essentially those of stone and coke as against lime and sulphur.

Labour difference is unsubstantial.

5. This factory commenced operations in 1936.

6. With conditions as they are at present, we do not contemplate extensions, but should there be an improvement we may consider installing an additional 3-mill roller and an additional pan, which were provided for in the original design. Extensions to the present centrifugal batteries will also be necessary.

7. (*a*) The main factors which determine the size of the factory are the amounts of cane available for milling and the transport facilities.

(*b*) The capacity of the factory should not be less than 400 tons per day.

8. The most of the equipment in sugar factories can now be obtained in India, but non-ferrous metals and tubes, heavy shafts for rollers, etc., boilers and special pumps and engines have to be imported.

9. (1) Our Managing Agents have a well-qualified Technical Staff and have had no need to call on the Imperial Institute of Sugar Technology for assistance.

(2) The Government do not inform us of the promulgated cane rates. These should be advised at least two days before they are due to come into force.

10. No. This does not apply to this factory which was erected under arrangements with the Balrampur Estate on their land and cane supplies are taken from their tenants.

11. *Nil.*

12. (*a*) Experiments are carried out in the Balrampur Raj Estate's own farms under their direct supervision.

(*b*) Seed is grown and supplied after selection by the above farms for distribution to tenants.

13. Experiments with various types of early and late varieties of cane and manuring by the Balrampur Raj Estate farms including the varieties Co. 290, 281 and 299 have been carried out. The first two varieties have proved good in sucrose and yield, but are too soft for this area which has forests on nearly all sides. Co. 331 as a late variety has been tried but owing to its similarity in colour to Co. 213, it has been decided to stop its production.

14. (*a*) This is the first season that this factory has operated.

15. We very seldom have damage from frost but from disease and insect pests the damage is very considerable. During the month of February this season a detailed survey was carried out to determine to what extent the cane was infested with disease and this worked out to 26·3 per cent. on the average causing a sugar loss of 1,708 maunds for the month or Rs. 10,248 monthly.

16. This factory is assured of a sufficient supply of cane in so much that it takes its supplies from the Balrampur Raj Estate's tenants and there is very little likelihood of competition. The main variety crushed is Co. 213.

(For sugar content of cane refer to reply to question 80, Form III.)

17. See paragraph 16.

18. (*a*) New planting has been affected this year due to fall in cane rate.

19. No. It is not in excess to requirements.

		Rs.	A.	P.
20.	Preparation	2	8	0
	F.Y.M.	17	8	0
	Planting :—			
	Seed	9	3	0
	Plough	1	2	0
	Labour	0	14	0
	Hoeing 6 times	4	2	0
	Rent	5	4	0
		40	9	0

21. (*a*) There are not sufficient carts in this area.

(*b*) Cartage rates are too high.

(*c*) Tolls on bridges are too high.

As regards (*a*), carts are gradually being made, and (*b*) this is the result of (*a*) whereby professional carters have come from other districts and have made their own rates—it will gradually improve when more suppliers have their own carts. (*c*) Toll rates should be considerably lowered on cane traffic.

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To ensure better control of cane deliveries at railway stations and factories the system of issuing passes for carts which we employ should be made compulsory. This by reducing the time carts are kept waiting would reduce transport charges where ryots employ professional carters for the carriage of their cane and save sugar losses due to stale cane. We also suggest that carts should be licensed.

22. Not practicable in this area.

(*a*) As most of the land belongs to the Balrampur Estate with whom the factory co-operates.

(*b*) We have insistently advocated the introduction of a system of "zones" for sugar factories. If this had formed a part of the legislation which was introduced at the time Government decided to grant protection to the sugar industry many of the difficulties with which the manufacturing side of the industry is now confronted would never have arisen. We fear that in some areas it is now too late for any effective legislative action to be taken, but there do exist areas where conditions make it possible for groups of factories to come to a mutual agreement for the equitable distribution of local supplies of cane, and in this Government might be of assistance in an advisory capacity.

23. Our policy is, and has always been, to do everything possible to develop local supplies of cane, by means of loans in cash at reasonable rates of interest—the supply of sound seed, manures and the provision of rubber-tyred carts on the hire-purchase system. It will be naturally realised, however, that if a factory's local supplies of cane are liable to be taken by outside factories, there is obviously less encouragement to the home factory to undertake development measures.

24. (*a*), (*b*) (i), (ii) We are in favour of the regulation of sugar production by means of quotas, and also the licensing of new factories, including extensions to those at present in existence.

Until there is a definite and material increase in domestic consumption, India's production of sugar may now be accepted as having reached saturation point, and to avoid the evils of over-production we consider that Government should at once take powers to limit the quantity of sugar which may be manufactured under a system of quotas. This remedy will not, however, be of any avail unless, linked thereto, the establishment of additional factories is prohibited and any extensions to the plant of existing factories, except for the purpose of increasing efficiency or improving the quality of the product.

This question becomes highly complicated by the position of Indian States towards the erection of their own factories and the export of sugar thus made into British India with possible non-reciprocity, but even if a satisfactory solution to this difficulty cannot in all cases be found, our opinion remains unaltered, that the regulation of sugar production in British India in a manner suggested is essential to the well-being of the industry and the many interests dependent upon it.

In this connection, we would emphasize the necessity of a decision being reached, if possible, before the end of the current year so that the cane planting programme during the ensuing winter can be worked out in relation to the sugar requirements of the country for the crushing season of 1938-39.

Season.	Gate Cane. Per cent.	Rail Cane. Per cent.
25. 1936-37	39·78	60·22

26. By carts only. The average per cart is 22 maunds. We have no improved types of cart.

27. Yes. Feeder roads cannot be called good as there are many *nullahs* to cross, main roads on the whole are good, but those maintained by the Balrampur Estate north of the river Rapti are for motor traffic only

and the cane carts have to use the cart *leeks* which in many cases are in bad condition.

28. Distances vary between ½ mile to 15 miles. The average time between cutting and delivery is 24 hours.

30. There are tolls on bridges over the rivers, *see* paragraph 21. The rates are 3 annas per loaded and 1 anna 6 pies per empty cart.

31. The *purji* or ticket system for a definite number of carts daily to the gate. Normally no cart is detained longer than 2-3 hours. The efficiency of weightment clerks has improved in speed of weighing and making out receipts—special cart lanes have been made for the rapid handling of traffic.

32. Carrying distances of 9 miles to 15 miles. Average time between cutting and delivery at the factory is 48 hours. Railway arrangements for the transport of cane are on the whole good, but improvements could be made in (1) siding accommodation at stations, and (2) a more adequate supply of cane wagons.

33. There is a scale of charges for each type of wagon per mile with a minimum rate per type of wagon and same is given herewith:—

Type of Wagon.	Rate per Mile.		Minimum rate per type of wagon.
	As.	P.	Rs.
Open cane wagons 6, 8 and 10 tons 14 ft.	2	6	5
Open cane wagons 10 tons 16 ft. and 11 tons 15 ft.	4	3	7
Cage trucks 10 tons	4	3	7
Cage trucks 12 tons	4	9	8
Covered wagons	3	6	6

These rates have been in force for several years now and are higher than they were eight years ago but the present flat rate basis is preferable to a maundage basis as cane being a bulky article does not fill wagons to their axle carrying capacity, and to introduce a maundage rate would, we feel, inevitably increase the freight costs as the railway would calculate the contents of a wagon on the carrying capacity rather than its actual load, which is considerably less.

34. See question 3 (*a*).

35. There are no tramways.

36. Yes, consider that a tramway system would be advantageous.

37. The loss through dryage and deterioration between cutting, milling varies according to the variety of cane but the loss is definitely serious in the months of March, April and May. The results of numerous tests carried out during these months in season 1932-33 indicated that the loss in weight through dryage amounted to 2·5 per cent. after 24 hours, 5 per cent. after 48 hours and 7 per cent. after 72 hours. Apart from the loss in weight, the purity of the juice in the cane deteriorated by one unit after 24 hours, five units after 48 hours and nine units after 72 hours. A detailed account of dryage and deterioration of cane varieties in Upper India is given in the 1933 issue of the Internationl Sugar Journal.

	Season.	Proportion of direct purchase.	Proportion of purchase through contractors.
		Per cent.	
38.	1936-37	100	*Nil.*

We are definitely opposed to the employment of contractors unless they possess marked influence and have a financial stake in the area in which they operate.

39. For cultivators taking advances from the factory a form of agreement is signed by them—this agreement is on a maundage basis. For those taking no advances, no agreement is signed. Advances are given in cash, seed and manure.

40. Cane purchased direct from growers.

41. No.

42. Carts arriving at the weighbridges are weighed immediately providing that they have the correct *purjee* or tickets in their possession.

Gross weights are recorded on the cane receipts and the suppliers off load their cane into wagons or in the case of gate cane to the carrier or trolleys. Having done this their carts are tared, the receipt completed and handed over to the supplier. Cashiers are at all weighing centres and pay on demand immediately.

43. Season 1936-37—

	Per maund.		
	As.	P.	
Opening rate . .	4	9	Government minimum rate.
From 16th December, 1936 . . .	4	9	Ditto
From 1st February, 1937	4	3	Ditto
From 1st April, 1937	4	0	Ditto
From 16th April, 1937 . . .	3	9	Ditto Main line.
Ditto	4	0	Loop line—increased by the factory for propaganda purposes.

44. Yes. Rate paid is the Government minimum rate fixed fortnightly.

45. The price of gur has no influence as so little is made here.

46. See No. 45.

47. Yes. See paragraph 43.

48. Under present conditions, the basis is not satisfactory and calculations should be based more on the rates obtained for sugar by average factories than on the special rates obtained by a few factories employing more expensive processes. We feel that the rates are based on a small proportion of special sugars which are being produced by certain factories.

We would also suggest that the 8 annas margin which is at present used in arriving at a scale be reduced to enable the cane rate to be adjusted more frequently and equitably.

We may have further suggestions to put forward at an early date.

49. An additional price of 3 pies per maund is being paid on Co. 299 cane—an early variety—this is done with a view to encouraging this particular type.

50. The duration of the crop for the past seven seasons is given under Question No. 80. The variations in the duration can be attributed to available supplies of raw material and the economical operating purity of the cane supplies.

Until such time as early and late ripening varieties have been established, it is our opinion that the economic duration of a cane season can be given as from 1st December to 15th April.

51. By the introduction of early ripening varieties the crushing season could be opened probably 2 weeks earlier, but it is questionable as to

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whether even with a late variety cane, it would be economical to crush later than the 31st May.

52. We have had considerable assistance from the Imperial Council of Agricultural Research and the Agricultural Departments of our Local Government. We feel, however, that their efforts are not sufficiently co-ordinated and that therefore they fail to give the help which we really need.

It occurs to us that the staff of these departments should be more mobile. The demonstrations and help which are required by us should be available on the spot, and we would suggest that a motor van equipped with cinematograph and loudspeaker equipment would meet a long felt want.

Propaganda could be carried on in this manner from village to village in the neighbourhood of established factories and the ryot could see demonstrations and hear actual explanations in his own language of all problems attached to the growing of his crops.

53. Seasonal Labour—

1. Skilled	168
2. Unskilled	491

Silent Season—Total 215 of which about 75 per cent. is skilled labour.

54. Most of the skilled labour comes from other parts of United Provinces and Bihar.

55. No skilled labour is imported from abroad.

56. All skilled labour is provided with quarters. Unskilled labour is local. Free Medical attention is provided and we have our own dispensary.

57. Power.

Extra fuel burnt during season—

1936-37—37,635 maunds Wood—Rs. 4,900.

After the factory got properly going it produced ample bagasse for running the plant. We do not bale surplus bagasse.

58. *By-products*—Bagasse, press-mud and molasses.

59. 1936-37—Molasses produced 83,001 Mds.

60. Indian Molasses Co., Ltd., Cawnpore Distillery, Local (very small sales). Tank wagons and in drums. Railway facilities are inadequate. Rail-freight paid by purchasers.

61. Surplus waste molasses are destroyed in a Brooks Molasses Furnace or utilised for steam generation. For steam generation purposes, molasses are not very satisfactory on account of the large deposit of ash of a corrosive nature on boiler tubes, etc.

It is suggested that molasses may be utilised for the production of Power Alcohol, Acetic Acid, Ether, Chloroform, Glycerine, Acetone, Citric Acid, Butanol, Carbon Dioxide for dry ice and Yeast.

62. At present there is no outlet for surplus bagasse, small quantities only being taken by the cane suppliers as fuel.

Bagasse could be manufactured into paper or board but the initial cost of the manufacturing plant will be high.

63. Sulphitation and well-weathered carbonitation press-mud can be utilised as a manure.

64. Storage and transport of sugar:

Beginning of season—	
1936-37	*Nil.*
End of season—	
1936-37	134,887 maunds.

65. Stored in Godowns:

The capacity of No. 1 Godown, 12 bags high, is 42,000 Mds.
Do. 2 do. 42,000 Mds.
Do 3 do. 42,000 Mds.
The maximum capacity of No. 1 Godown is 54,000 Mds.
Do. 2 do. 56,000 Mds.
Do. 3 do. 63,000 Mds.

66. The extent to which sugar may deteriorate is chiefly dependent upon the period of storage and weather conditions. Apart from the period of storage and weather conditions factors influencing the keeping quality of sugar are numerous but it may be stated that the construction and condition of the godowns in which sugar is stored, temperature at which the sugar is bagged, packing, stacking and stacking medium employed, together with sugar quality, all play a part in the keeping quality of sugar.

67. Damaged sugar is usually reconditioned.

68. The production of sugar of greater purity, of bold and regular crystal free from dust and broken grain, will undoubtedly improve the keeping quality.

69. The damage of sugar in transit from the factory can be attributed to the type of rail wagon or flat used and weather conditions during transhipment.

70. Yes, especially during the grain season.

71. We would suggest that the railway carry a much larger stock of wagons and have them so ventilated that a free passage of air is allowed to circulate without fear of rain water getting into the wagon.

72. Our sugars are sold on an f.o.r. factory basis, the price being one for important markets. We have no record of second hand prices for our product at the ports and upcountry, but give below the actual f.o.r. price obtained during the past season. We also give the freight from the factory to the ports and certain upcountry markets:

Station.	Freight. Rs. A. P.	F.o.r. Price. Rs. A. P.
Allahabad	0 12 0	6-2-0·5
Cawnpore	0 6 0	
Lucknow City	0 5 2	
Calcutta	1 1 4	
Bombay	1 4 0	
Madras	1 1 9	
Karachi	1 0 0	

73. We enclose copies of the Balance Sheets.*

74. This factory belongs to the Balrampur Sugar Co., Ltd. It has not yet worked a full season, and no depreciation has been provided, since the start of operations of this factory.

75. This factory belongs to the Balrampur Sugar Co., Ltd. It has not yet worked a full season, and no amount has been set aside for Reserve Fund.

76. This factory belongs to the Balrampur Sugar Co., Ltd. It has not yet worked a full season, and no dividends have been declared since the start of operations of this factory.

77. The Bank allows overdrafts under agreement for cash credit, by which stocks, etc., are pledged. The rate at which the Company, of which

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* Not printed.

this unit forms a part, is able to borrow is, bank rate subject to a maximum of 9 per cent. and a minimum of 3 per cent.

78. As this factory only commenced operation in 1936-37, figures are not yet available for the financial year which closes on 30th June.

79. Considering the hazardous nature of the enterprise, the risks of drought, floods, pests, the machinations of buyers, the excise duty, the costs of maintenance, the demands of taxation, a balance of 10 per cent. at credit of revenue, after allocations to depreciation and reserve accounts, is not excessive.

80. Form* 3 referred to is attached. As regards Forms 1 and 2 the figures in respect of 1936-37 cannot be submitted as our financial year is not yet closed.

81. Owing to the complicated nature of the returns called for we are unable to submit the information in the allocated time, and we will do so as soon as the returns are completed.

82. Every possible economy has been effected in the works and efficiency brought to a high standard, comparing favourably with other sugar producing countries, that there is very little margin for further reductions in the works and we must now look to a higher sucrose content and for further reductions in cost of cane.

83. Punjab.

84. We are unable to give particulars of the relations between dealers and retailers, but so far as we are concerned, we are put into touch with our dealers by our brokers. Up to this year we had several brokers working on a commission basis from 8 to 12 annas per Rs. 100. These brokers would make us offers, which, if accepted, would be confirmed by contract between ourselves and the dealers, a deposit being required as earnest money, which the dealers paid; interest was allowed on this deposit. During the current season, we have obtained Sole Distributors for the whole of India—Messrs. Ralli Bros. Ltd. While the system of their making us offers on behalf of dealers still continues to a lesser extent, the chief method of doing business is for us to give them option for a fixed period on quantities of each grade of sugar which we wish to dispose of, fixing the minimum price at which they can sell. In this case also, the arrangement between them and ourselves is by agreement, the actual contract, which is supplementary to the agreement being entered into primarily between them and their dealers.

NOTE.—This reply is from our Managing Agents who deal with all sugar sales.

85. The new Indian Sugar Mills Association contract form is satisfactory except as regards Clause 8. The responsibility for the condition of sugar sold f.o.r. factory should be more clearly defined, as falling upon the buyer. Unless the buyer takes delivery at factory it is impossible to prove in what condition the sugar was despatched, and whether damage took place while in the hands of the carrier.

86. The figures with regard to this question can be obtained from dealers, importers and brokers. We ourselves are unable to give accurate figures, especially as most of our business in the past has been done through dealers in the Cawnpore market, and on an f.o.r. factory basis.

87. Variations in this case will occur when comparing wholesale forward business with ready petty sales, but for spot business there is little fluctuation between wholesale and retail prices, though the difference between these actually varies according to quantity, up to approximately 4 annas per maund.

We have taken the retail prices as covering lots of 5 to 25 bags, which are not necessarily in shop-keeper's hands, there possibly being a further difference in the actual shop price to the consumer.

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* Not printed.

88. We have very little information as to the storage arrangements made by dealers, but from our experience we understand that they are disinclined to keep stocks, preferring to utilise factory storage space, even to the extent of getting 3 or 4 months in arrears in deliveries. We have already given you our experience with regard to deterioration in storage against Question No. 66. We have no definite information with regard to conditions prevailing in dealers' godowns.

89. Under similar storage conditions we are of the opinion that Java sugar will deteriorate to the same extent as a good quality Indian sugar.

It is only in very recent years that the keeping quality of sugar produced in India has become a subject for serious consideration, since large stocks of sugar must now be stored throughout the monsoon period. Since it has been recognised that there has been a vast improvement in the quality of sugar manufactured in India, the keeping quality has also undoubtedly improved.

90. With the exception of the demand for Indian made sugar by a limited number of orthodox Hindus on religious grounds, Java, or other imported sugar is preferred, particularly by the middle and upper class Indian consumers. The reason for this is, we believe, the uniformity of grain and superior, consistent colour of the imported sugar.

91. The average quality of sugar manufactured in India is inferior to imported Java sugar but there are many factories in India producing a final product equal if not superior to that of Java.

The average Indian sugar is inferior to imported Java sugar in respect of purity, colour and uniformity of crystal size.

92. In our opinion the manufacturers carry the bulk of the stocks of Indian made sugar, the only dealers carrying stocks to any large extent being those at ports where storage facilities are offered by the Carrying Companies. Upcountry dealers normally carry only sufficient stock for the immediate need of local retailers.

93. Yes. We consider this most desirable.

94. We favour a Central All-India Selling Organisation, provided licensed control of production is also introduced. We consider, however, that it should be independent of Government control.

95. We think that the present system of standardisation is open to grave question. The value of a sugar does not depend on the size of the crystal or on its appearance in bulk in a glass container. Further, it is impossible to get two observers to agree to the standard on such a crude system.

We would favour standardisation on rational lines which would include:—

(1) The polarisation of sugar content.

(2) The colour determined in some formal way in an apparatus such as the Lovibond Tintometer and expressed in definite colour units.

(3) The quantity of suspended matter.

(4) Possibly, but not necessarily, the quantity of ash might also be included. Ash is of importance to the sweetmeat maker but he is not yet educated enough to appreciate its influence.

(5) Uniformity of grain and absence of dust may also be included.

96. (*a*) We have done no business so far on the basis of sugar standards. The reason we have not yet sold on this basis is that the graduated scale of price difference has not yet been agreed upon and the industry as a whole is not prepared to sell on the basis of the standards. It is also felt that most factories are not yet in a position to turn out a uniform product capable of being graded under the standards.

(*b*) Yes. These standards are being used extensively at all our factories for internal control.

97. As opposed to standardising sugars, Messrs. Begg Sutherland and Co.'s Group of Factories are to base their selling standard in respect of the next season, as follows:—

> Factory managers are to be asked to lay aside a certain number of bags of sugar now of a standard which they expect to maintain during the next season. These bags are to be used as samples next season and the output based on these samples. Special care will be taken in storing these bags during the monsoon.

98. The possibilities of establishing a central marketing organisation, including a complete survey of markets, has been before the Indian Sugar Mills Association from time to time, but no progress has been made. We are in favour of an organisation on the lines of the Cement Marketing Board being set up, provided its control is vested in an independent body and it embraces all producers, with Government prohibition of new factories and extensions for purposes other than improvement of quality and efficiency.

The establishment of a "futures" market by dealers' associations, on the lines of the East India Cotton Association should make for stability in prices by providing security for dealers' operations, and thereby improving the general trade in sugar.

99. Over a period of seven years we believe the consumption of sugar, including Khandsari, and sugar refined from gur, to be about 1,300,000 tons annually, but as a result of the lower prices now ruling this figure should be exceeded.

An increased advertising campaign by the industry through its associations and possible collaboration with the tea industry would, we believe, lead to increased consumption, the necessary funds being provided on the lines of the Indian Tea Cess.

100. We believe that factory sugar is replacing gur in the trade in increasing quantities, but we have no reliable information.

101. We see no immediate prospects of the establishment of fruit-canning in India.

102. This information can be given much better by importers such as Messrs. Ralli Brothers, Ltd., Calcutta, Bombay, Madras and Karachi, Messrs. A. H. Bhiwandiwalla, Bombay, Messrs. Parasram Paroomlal and Co., Calcutta, and Messrs. Kian Gwan Co. (India), Ltd., Sassoon House, Calcutta.

103. It may be accepted that Java, the chief importing country, has not realised remunerative prices for her sugars in any year between 1930 and 1936. In support of this view there is the knowledge that Java's production has fallen from 3,250,000 tons in 1930 to 500,000 tons in 1936.

104. None by sea so far as we know. A relatively small quantity finds its way across the northern frontiers.

We do not consider India could profitably export sugar unless world prices advance very considerably and then only if Indian sugar received specially favourable treatment on entry into the United Kingdom. There is, of course, the very remote possibility of India being in a position to sell a portion of her production for export at a loss, provided there was a compensating rise in internal prices.

105. The imposition of the first levy of excise had some effect in not inducing unadvised expansion which would, however, have been better prevented by a system of licensing and zoning at the time protection was given, and in relation to a considered estimate of the demand existing for sugar in India. The latter imposition coincided with a period of abnormally low prices for sugar, which persists to-day. Owing to trade conditions the manufacturer, except for a very brief period, has not been able to pass on any share of the excise to the consumer. We have never understood why the cane growing section of the industry has not been

called on to bear some share of the excise. The industry could have accepted with comparative equanimity a levy on profits on a reasonable scale.

106. A certain quantity is absorbed in the manufacture of country tobacco. Where distilleries exist molasses form a base for the production of alcohol. Recently a molasses exporting corporation has set up an organisation for the collection and export of molasses and has made extensive purchases. No data is available with us regarding the extent of these transactions but they must be of considerable magnitude. The prices realised do little more than cover handling charges. The residue we destroy in specially designed furnaces.

107. This has partly been dealt with under the preceding question. We understand the destination of the molasses exported by the Corporation is the United States and the United Kingdom and it is used for the production of industrial alcohol. The possibility of export is handicapped by the inadequacy of transport facilities.

108. We are not altogether clear as to what is meant by "effective". If the development of an industry by an increase in production of 1,000,000 tons is effective, the answer is 'yes'. If 'effective' means the establishment of an ordered industry with security of capital combined with sound finance the answer is 'no'.

The effect of the import tariff, created in 1932, has been to create a barrier against imports from abroad behind which the industry has developed at an extraordinary rate of progress—a very unhealthy rate as events have turned out. This expansion has taken place without any control either by Government or the industry itself. What appeared to be an attaractice outlet for capital-seeking employment has resulted in the launching of numerous undertakings without any proper consideration being given to local conditions. Supplies of suitable raw material—financial requirements and in many instances without adequate, or even any, expert knowledge. The result has been that although India has been rendered self-supporting as regards her sugar requirements, her revenues have suffered severely from an almost complete stoppage of imports, while the domestic industry due to the reckless establishment of factories—many of which are unsuitably situated, the need of replacing revenue hitherto realised from the import tariff by the imposition of an excise duty—an utter absence of any organisation for the marketing of its sugar finds itself to-day confronted with a situation which, to say the least of it, can only be described as extremely critical even in the case of the most efficient units of the industry.

109. The original object of protection aimed at the country producing its total sugar requirements, and this object has already been attained. We therefore consider that the extent of protection should be kept at such a level as to limit imports of foreign sugar.

We are of opinion that the existing level of protective duty is such that the ryot obtains an equitable return for his enterprise, and that this will only continue provided the position is not aggravated by imports of sugar from abroad.

It does not follow that world conditions will remain unaltered between now and 1946, and we therefore recommend the present level of protection being maintained, and further, that the Government should take powers to regulate it as and when necessary, to limit the entry of foreign sugar into the country.

110. (1) Improvement in agriculture and communications and the application of research so as to reduce the cost of cane and improve its sugar content.

(2) Means to control borer infestation and simultaneously increase the sugar content of the cane.

(3) The adoption of the zoning system which will allow factories to help the small grower to make use of the results of research.

(4) Means to ensure the manufacturer obtaining a fair share of the protection by correlation between the cost of cane and effective selling price of sugar (after deduction of excise) which will demand a centralised marketing organisation with power to regulate sugar prices.

111. So far as we are aware, no industry has been affected by the import duty on molasses.

Ishwari Khetan Sugar Mills, Ltd., Gorakhpur.

Letter No. 4035/37, dated the 5th November, 1937, containing replies to Extract from General Questionnaire.

As desired by you in your letter dated 17th September, 1937, we submit the certain figures to you for your information:—

(1) Year 1928.

(2) Statement enclosed herewith (Enclosure No. 4).

(3) Double sulphitation.

(4) Statement enclosed herewith (Enclosure No. 1).

(5) None.

(6) No, we do not take any cultivation of cane, but the managing agents have got a farm near about the factory the cane of which is supplied here.

(7) Statement enclosed (Enclosure No. 2).

(8) Statement enclosed herewith (Enclosure No. 3).

(9) No.

(10) We have been making efforts to economise the expenditures and we find things have been improved fairly but no record for same has been kept, so as to furnish you the information required under this head.

Capital Account and Overhead Charges.

1-3. Statements are enclosed herewith (Enclosure No. 5).

4. Working capital is generally provided by managing agents and some times from Bank.

5. Commission on profits up to Rs. 50,000=5 per cent., Rs. 50,000 to Rs. 2,00,000=7½ per cent. and above 10 per cent. before deducting depreciation out of the profits for the purpose of commission. Besides, Rs. 1,000 per month is paid as Managing Agents remuneration.

Amount of commission already paid to the managing agents:—

Year.	Amount paid. Rs.	A.	P.	
1930 . .	8,194	3	0	
1931 . .	38,198	6	6	
1932 . .	53,398	0	0	
1933 . .	58,577	0	0	
1934 . .	61,104	0	0	
1935 . .	11,079	0	0	
1936 . .	14,988	0	0	Due for payment to Managing Agent.

Enclosure No. 1.

The following changes have been made in the lay out of the Ishwari Khetan Sugar Mills, Ltd., Lakshmiganj with extensions of plant or replacement of machinery have been made since 1930, also the amount spent thereon:—

Extensions.

1930-1931.—One boiler of Messrs. Babcock and Wilcox of 3,140 heating surface.

1933.—Cane carrier; engine, etc., etc.

1934.—A new pan, a dynamo, a few tanks for juice and sulphur furnace.

1935.—Centrifugal injection water pump, crystallizer, dry air pump and one spray cooler.

1936.—Extension of chimney, feed pump new, centrifugal pump, cylinder for dry air pump.

Total amount spent of these extensions = Rs. 1,11,609.

Enclosure No. 2.

The following figures show the duration of the crushing season for each of the last seven years with reasons for variations:—

Year.	Crushing commenced on and from	Closed for the season on
1930-31 .	29th November, 1930	10th May, 1931
1931-32 .	22nd November, 1931	12th May, 1932
1932-33 .	15th November, 1932	10th May, 1933
1933-34 .	9th November, 1933	20th April, 1934
1934-35 .	2nd December, 1934	31st March, 1935
1935-36 .	15th November, 1935	26th April, 1936
1936-37 .	3rd December, 1936	20th May, 1937

Reason for variation of the above crushing seasons.—When the rains were suitable and timely—cane crop was plenty and we could continue crushing for a long time. On the other hand when the cane crop was defective we had to close it earlier for having poor percentage of sugar in juice.

Enclosure No. 3.

The following are the figures of the sugar stocks of the Ishwari Khetan Sugar Mills, Ltd., Lakshmiganj at the beginning and end of each crushing season since 1930:—

Year.	Beginning stocks.	Closing stocks.
1930-31 . . .	Not traceable.	1,288
1931-32 . . .	1,288	3,923
1932-33 . . .	3,923	15,360
1933-34 . . .	15,360	1,656
1934-35 . . .	1,656	1,684
1935-36 . . .	1,684	29,633
1936-37 . . .	29,633	24,532

Enclosure No. 4.

The output of the Ishwari Khetan Sugar Mills, Ltd., Lakshmiganj, for the last seven years:—

	Bags.	
1930-31	67,809	
1931-32	63,861	
1932-33	77,883	
1933-34	79,518	
1934-35	51,597	
1935-36	88,361	
1936-37	92,176	(6,512 bags weighing 2 mds. 28 srs.)

Enclosure No. 5.

Capital Account and Overhead Charges.

1. (*a*) Block capital in 1930-31 or the first year of operation whichever is later—Rs. 8,38,384.

(*b*) Block capital for 1935-36—Rs. 5,96,902.

(*c*) Depreciation written off during this interval—Rs. 3,80,469.

(*d*) Renewals and additions during this interval:—

- (*a*) Lands—*Nil.*
- (*b*) Buildings—Rs. 18,637.
- (*c*) Plant and machinery—Rs. 1,11,609.
- (*d*) Other assets such as railways, sidings, furniture and electric installations—Rs. 8,742.

2. The amount we have set aside for reserve fund during the last seven years—Rs. 2,10,971.

Our reserve fund is invested in business and on the shares of the Maheshwari Khetan Sugar Mills, Ltd., Ramkola, Bengal and North-Western Railway.

3. Statement of dividend for the last seven years:—

	Per cent.	Rs.	
1931	20	2,08,600	On all ordinary shares of Rs. 1,000 each.
1932	25	2,60,750	
1933	30	3,12,900	
1934	30	3,15,000	
1935	25	2,62,500	
1936	6	63,000	
1937	10	1,05,000	
Total		15,27,750	

Maheshwari Khetan Sugar Mills, Ltd., Gorakhpur.

Letter No. G. L. 5219, dated the 27th October, 1937.

With reference to your letter No. 684, dated the 17th September, 1937, we are sending you herewith our replies to the General Questionnaire.

Enclosure.

Capital Account and Overhead Charges.

		Rs.	A.	P.
1.	(a) Block Capital in 1932-33	12,71,159	15	9
	(b) Block Capital in 1935-36	13,90,416	5	6
	(c) Up to 1935-36	2,91,088	7	3
	(d) (a)			
	(b) Buildings	558	0	9
	Buildings (2nd)	17,784	11	2
	(c) Machinery	70,530	3	11
	Tools and Plants	15,614	13	6
	(d) Railway Siding	8,631	1	2
	Furniture	1,166	11	6
	Tube Well	4,970	10	9

2. Four Years—Rs. 80,556-10.

Our Reserve Fund is invested in business.

3. *Actual amount of Dividend distribution:—*

	Rs.
1932-33	1,80,150
1933-34	3,00,250
1934-35	1,44,120
1935-36	1,44,120
Total	7,68,640

4. Managed by the Managing Agents. Interest at 6 annas per cent. per month.

5. A commission of 1 (one) per cent. on all sales of the Company's products payable at the end of each month.

A commission on the profit of the Company at the rate of 5 (five) per cent. up to the first fifty thousand rupees, and at the rate of 7½ (seven and a half) per cent. up to two lakhs of rupees after the first fifty thousand and 10 (ten) per cent. on the rest of the profits after two lakhs of rupees payable yearly on the expiry of the 30th day of September every year. There is no separate Head Office.

Managing Agents Commission.

	Rs.	A.	P.	
1932-33	25,774	11	3	At Re. 1 on Sales, Commission on Profit at 5 per cent. up to the first 50,000 and 7½ per cent. up to two lakhs.
1933-34	74,346	4	6	
1934-35	35,149	11	6	
1935-36	36,969	8	6	

Replies to Extract from General Questionnaire.

1. From 1932-33—Capacity 500 tons.

2. Four years—

	Maunds.
1932-33	2,150,226
1933-34	2,373,000
1934-35	2,054,576
1935-36	2,638,121

3. Double Sulphitation.

4. *Replacement.*—Old Condensing Plant and Air Compressor have been replaced by new Sets of their double capacity.

Addition.—One new Vacuum Pan of the same capacity as of old one and one pre-Evaporator of 2,500 square heating surface together with one Seed Mixer, Magma Pump and Screw Conveyor have been put in.

5. *Nil.*

6. No.

7. 1st year from 11th November, 1932, to 15th May, 1933.
2nd year from 9th November, 1933, to 26th April, 1934.
3rd year from 25th November, 1934, to 16th April, 1935.
4th year from 15th November, 1935 to 3rd May, 1936.

		Bags.
8.	1932-33	12,646
	1933-34	3,338 and 9¾ bags Rori.
	1934-35	2,164
	1935-36	23,977

9. No.

The United Provinces Sugar Co., Ltd., Gorakhpur.

Letter dated 7th October, 1937.

Further to our letter of 23rd ultimo, we send you herewith our replies to the supplementary questionnaire enclosed with your letter No. 684 of 17th idem. Form 1 has not yet been completed and will follow. As the Company's financial year only ended on 30th ultimo, we regret, we cannot send you our Balance Sheet for 1936-37, but the Company's printed Directors' Reports and Statements of Accounts for the years ended 30th September, 1931, 1932, 1933, 1934, 1935 and 1936 are enclosed herewith.

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Enclosure.

Replies to questionnaires enclosed with Circular No. 684, dated the 17th September, 1937, from the Secretary, Sugar Tariff Board.

1. Season 1913-14.

Present capacity—925 tons cane per day.

	Season.	Maunds cane crushed.	Maunds sugar manufactured.	Recovery per cent cane.
2.	1930-31	1,810,340	156,260	8·63
	1931-32	1,833,236 (Cane)	155,563	8·48
		54,846 (Gur melted)	30,066	54·82 on Gur.
	1932-33	2,060,843	163,801	7·95
	1933-34	2,093,615	196,060	9·36
	1934-35	2,454,716	213,751	8·71
	1935-36	2,929,768	256,120	8·74
	1936-37	3,460,806	338,755	9·79

3. Double Sulphitation.

4. Alterations and extensions to Plant, 1932-37 :—

	Rs.	A.	P.
Alterations, 1932—			
Filter Press station removed from inside factory to a separate staging and building outside for purpose of cleanliness inside and future extensions.	30,703	6	3
Old original cane carrier removed and replaced with modern steel salt engine driven carrier complete with cane cutting knives and engine.			
Extensions, 1932—			
Two 5′ x 4′ 3″ x 2′ 9″ 2nd Juice Settling Tanks.	1,889	2	7
One 7′ x 5′ x 4′ Syrup Juice Settling Tanks .			
Total .	32,592	8	10
Alterations, 1933—			
Large Vacuum Pump fitted with modern pump end.	2,90,979	5	7
Old 30″ x 60″—11—Roller milling plant replaced by a modern 14—28″ x 56″ Roller Plant.			
Thompson water tube boiler furnace altered to another more modern design.			
Extensions, 1933—			
Two 7′ x 4′ x 4′ 6″ 1st Juice Settling Tanks.	27,059	9	8
One 4′ x 3′ 6″ x 6′ 6″ Syrup Sulphuring Tanks.			
One 5′ 6″ diameter Juice Sulphuring Tanks.			
One 7′ x 5′ x 4′ Syrup Settling Tank . .			
One 5′ 6″ diameter Aspinal Pan with Staging.			
One Elevated sugar floor, with rotary sugar seive and storage bins.			
One 3′ 6″ diameter sugar dryer complete with wet sugar elevator.			
Total .	3,18,038	15	3
Alterations, 1934—			
Old belt driven centrifugal battery replaced by battery of 17—40″ x 20″ water driven machines complete with all accessories and turbine driven centrifugal water pump for water power .	79,188	10	6
Extensions, 1934—			
Four 7′ x 4′ x 4′ 6″ 1st Juice Settling Tanks.	1,716	4	10
Two 5′ x 4′ 3″ x 2′ 9″ 2nd Juice Settling Tanks.			
Total .	80,904	15	4

	Rs.	A.	P.
Alterations, 1935—			
Three Old Multitubular boilers replaced by 2 Babcock and Wilcox Water Tube Boilers of 4,780 sq. ft. H. S. each.	1,31,304	7	9
One Old Coil Pan connected to a double calandria pan of 1,001 sq. ft. H. S. complete with condenser.			
Two Old Crystallizers replaced with 2 of larger capacity, *i.e.*, 560 cu. ft.			
Two Vacuum and Superlifting Traps fitted in place of triple syrup extraction pumps.			
Extensions, 1935—			
One Old Crystallizer of 462 cu. ft. capacity erected as seed mixer.	2,511	13	11
One Old Seed Mixer arranged at centrifugals as magma mixer.			
One Old Massecuite Pump for above magma.			
Total .	1,33,816	5	8
Alterations, 1936—			
Centrifugals 1st and 2nd battery arranged with 2 gutter system.	23,099	14	7
Eight 2nd settling tank discarded . .			
Three Aspinal pans discarded . . .			
All line and exhaust steam pipes covered with 85 per cent. Magnesia in place of old inefficient covering.			
Raw juice, Sulphured and Triple supply pumps replaced by others of larger capacity. Two of these old pumps used to replace two smaller pumps used for Sulphured syrup and water service.			
Two Babcock and one Thompson boiler fitted with Tracy Steam Purifiers in place of original dry pipes.			
Extensions, 1936—			
Two 2½″ bore molasses pumps at centrifugals.	39,898	9	11
One 6″ bore massecuite pump at centrifugals.			
One 6″ bore massecuite pump at crystallizers.			
One Screw Conveyor at crystallizers . .			
Three 500 sq. ft. Mud Filter Presses complete with staging.			
Four 500 sq. ft. clarified Juice Filter Presses.			
Total	62,998	8	6

	Rs.	A.	P.
Alterations, 1937—			
One Small Sulphur burner for supplying syrup sulphuring tanks above . .	1,810	0	0

Extensions, 1937.—Two 6′ diameter sugar melting tanks still in hand.

5. Nothing of importance for the time being apart from 2 Sugar Melting Tanks being installed and possibly a Sugar Grader next year.

6. Yes.

(*a*) Total area actually cultivated by the Company:—

Season.	Acres.
1930-31	Meantime not available.
1931-32	
1932-33	
1933-34	*3,374·93
1934-35	3,416·68
1935-36	3,669·33
1936-37	3,813·48

(*b*) Area under cane each year:—

	Acres.
Cane planted in 1930	939·18
„ „ „ 1931	1,132·63
„ „ „ 1932	1,048·83
„ „ „ 1933	970·66
„ „ „ 1934	1,172·72
„ „ „ 1935	1,187·31
„ „ „ 1936	1,238·58
„ „ „ 1937	1,317·66
Ratooned for season 1937-38	382·96

(*c*) Apart from No. 10 improved Coimbatore varieties only have been grown since 1933, principally Co. 210 and Co. 213, the areas under these two varieties combined being as follows:—

	Acres.
1933	712·12
1934	735·04
1935	781·39
1936	695·71
1937	850·74

(*d*) Three year rotation. Hemp ploughed in as green manure, followed by cane followed by oats. Seasonal following practised interspersing rotation as above. The manuring programme consists of green manure, usually hemp, being ploughed in prior to planting cane and subsequent application of 10 maunds castor cake *plus* 2 maunds double superphosphate at the time of planting. Cattle manure, press mud and compost utilised as available.

(*e*) Average yield per acre per variety in maunds:—

Cane Planted.	1933.	1934.	1935.	1936.
No. 10 (Ratoon) . .	131·28	...	...	...
Co. 214	285·10	181·00	247·32	...
Co. 285	388·36	469·26	368·03	414
Co. 210	429·14	346·19	363·28	367
No. 10 (Planted) .	461·10	333·22	364·00	348
Co. 213	476·32	368·20	344·08	434
Co. 299	...	461·28	377·00	337
Co. 331	...	759·20	476·66	430
Co. 313	...	...	265·00	487
Co. 393	...	...	...	678
Co. 326	...	...	...	568
Co. 356	...	...	...	402

(*f*) Cost of cultivation per acre:—

Details.	1934.	1935.	1936.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Country Crops (Oats)—			
Tractor Ploughing . .	2 14 5	3 0 0	2 3 4
Bullock Ploughing . .	0 6 3	0 7 8	0 6 8
Harrowing . . .	1 4 11	0 11 10	0 2 10
Seed and sowing . .	2 13 8	2 10 7	2 7 9
Levelling . . .	0 1 0	0 0 10	0 1 1
Weeding . . .	0 1 10	0 2 10	...
Reaping . . .	1 5 7	1 8 11	1 9 9
Carting Harvest . .	0 2 5	0 3 1	0 7 5
Threshing and Bagging .	4 10 4	3 13 6	3 14 6
Sweeping . . .	...	1 13 0	1 4 2
Stores . . .	0 6 6	0 5 8	...
	14 2 11	14 13 11	12 9 6
Resting Land (Hemp)—			
Tractor Ploughing . .	2 7 0	1 9 8	1 12 8
Bullock Ploughing . .	0 6 6	0 6 1	0 6 5
Harrowing . . .	0 10 3	0 4 8	0 10 2
Weeding . . .	0 0 7	0 0 11	0 1 0
Hemp Seed . . .	2 2 4	2 7 0	2 6 7
Sowing Charges . .	0 2 9	0 1 0	0 1 10
Levelling . . .	0 0 10	0 0 9	0 0 10
Ploughing . . .	1 3 11	0 15 2	1 6 5
Press Mud Carting . .	5 11 8	5 12 10	6 11 6
Application . . .	0 6 6	0 3 9	0 8 3
Cattle Manure Collection .	0 8 6	0 7 3	2 0 6
Application . . .	...	...	1 7 5
	13 12 10	12 5 1	17 9 7

Details.	1934. Rs.	A.	P.	1935. Rs.	A.	P.	1936. Rs.	A.	P.
Sugarcane—									
Tractor Ploughing . .	2	4	6	2	10	6	2	3	7
Bullock Ploughing . .	0	5	6	0	10	1	0	7	3
Cattle Manure . .	2	8	6	6	7	1	...		
Castor Cake . . .	12	8	6	14	6	9	12	15	4
Superphosphate . .	7	14	10	9	9	6	8	3	0
Carting Superphosphate .	0	2	11	0	4	0	0	4	3
Harrowing . . .	0	11	5	0	13	9	0	2	9
Weeding . . .	0	3	5	0	2	8	0	1	0
Planting . . .	2	9	5	2	1	6	2	1	2
Seed Cane . . .	16	7	6	16	5	9	16	8	5
Carting Seed . . .	0	5	5	0	9	2	0	8	11
Levelling . . .	0	0	11	0	1	0	0	0	11
Infilling	...			...			0	1	0
Cultivating . .	0	8	4	0	7	10	0	3	9
Ridging . . .	1	7	10	0	9	10	0	3	10
Cutting . . .	0	5	4	0	4	2	...		
Stripping . . .	1	15	0	1	5	11	1	2	7
Carting . . .	11	13	3	11	1	3	8	8	8
	62	4	7	67	14	9	53	12	5

7.	1930-31	24th November to 1st May.
	1931-32	30th November to 5th May (Cane). 29th June, 1932, to 20th August (Gur).
	1932-33	17th November to 14th May.
	1933-34	19th November to 25th April.
	1934-35	13th November to 20th April.
	1935-36	16th November to 4th May.
	1936-37	2nd December to 26th May.

The closing date each season has been governed by the exhaustion of the available cane supplies.

By common agreement the majority of the factories in the United Provinces decided to postpone the start of the 1936-37 crushing season until 1st December, 1936. Previously the starting date had been dictated by the sucrose content of the cane in conjunction with the price of sugar.

8. Sugar Stocks:—

Season.	At opening of Season.		At close of Season.	
	Sold.	Unsold.	Sold.	Unsold.
	Mds.	Mds.	Mds.	Mds.
1930-31 .	Not available	Not available	Not available	Not available
1931-32 .	Ditto	Ditto	Ditto	Ditto
1932-33 .	Ditto	Ditto	Ditto	Ditto
1933-34 .	Ditto	Ditto	Ditto	Ditto
1934-35 .	Ditto	Ditto	47,288	58,668
1935-36 .	58	3	13,148	187,183
1936-37 .	30,090	27,040	165,473	24,020

9. The factory has 3 sugar godowns with a maximum storage capacity of 175,000 maunds during the working season, 200,000 maunds at the close of manufacture.

The storage capacity has not been increased during recent years but it may be necessary to consider increasing it in the near future.

1. *Capital Account and Overhead Charges.*

——	Lands.	Buildings.	Plant and Machinery.	Other assets, *e.g.*, Railway Siding, Furniture, etc.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
(*a*) Depreciated Block, 1930-31.	2,09,897	1,51,139	2,37,461	24,584	6,23,081
(*b*) Depreciated Block, 1935-36.	2,10,091	1,55,428	4,84,677	31,601	8,81,797
(*c*) Depreciation written off from 1931-32 to 1935-36 inclusive.	..	50,338	3,60,708	19,495	4,30,541
(*d*) Additions from 1931-32 to 1935-36 inclusive.	194	54,627	6,07,924	26,557	6,89,302

The figures for Lands given above include Zemindary lands. Under the other headings the figures given relate to the sugar side of the Company's business and the figures relative to the Zemindary have been excluded.

2. Amounts set aside for reserve:—

	Rs.
1931	*Nil.*
1932	1,00,000
1933	60,000
1934	40,000
1935	11,556
1936	*Nil.*

The reserve fund is invested in the business. There is also an investment in the Belsund Sugar Co., Ltd.

		Rs.
3.	1931 Ordinary Shares	2,00,000
	1932 ,, ,,	2,80,000
	1933 ,, ,,	1,60,000
	1934 ,, ,,	1,60,000
	1935 ,, ,,	1,20,000
	1936 ,, ,,	*Nil.*

4. Working Capital is provided by the Managing Agents, interest at 5 per cent. being charged on debit balances.

		Head Office expenses.	Managing Agents' Commission.	Total.
		Rs.	Rs.	Rs.
5.	1930-31	9,000	22,774	31,774
	1931-32	9,000	28,213	37,213
	1932-33	9,000	22,743	31,743
	1933-34	9,000	24,108	33,108
	1934-35	9,000	26,241	35,241
	1935-36	9,000	27,197	36,197
	1936-37	9,000 (Est.)	30,600 (Est.)	39,600

Managing Agents' Commission is calculated at 1¼ per cent. on the gross proceeds of sugar and molasses sold. The Managing Agents undertake the selling of a portion of the factory's output without additional remuneration.

The Lakarmandi Sugar Mills Co., Ltd., Gonda.

REPLIES TO EXTRACT FROM GENERAL QUESTIONNAIRE.

With reference to your letter No. 685 of the 17th September, 1937, we beg to enclose herewith six copies of the form I and extract from General questionnaire (including questions on capital account and overhead charges).

REPLIES TO EXTRACT FROM GENERAL QUESTIONNAIRE.

1. In the year 1935-36, capacity 150 tons.

		Mds. Srs.
2.	1935-36	16,142 20
	1936-37	24,782 20

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3. Double Sulphitation.
4. No extension and changes.
5. No extension.
6. No sugarcane cultivation.

7.	1935-36	3rd January to 10th May, 1936.
	1936-37	3rd December to 23rd April, 1937.

8. In the beginning of the season there was no sugar stock. In the end of the season the stock was as follows:—

	Bags.
1935-36	150
1936-37	2,000

9. Yes.
10. *Nil.*

Capital Account and Overhead Charges.

1. (*a*) 1935-36—Rs. 1,68,400.
(*b*) 1936-37—Rs. 1,69,000.
(*c*) *Nil.*
  (*a*) *Nil.*
  (*b*) Rs. 25,500.
  (*c*) Rs. 1,90,636-2.
  (*d*) *Nil.*
2. *Nil.* *Nil.*
3. *Nil.*
4. Borrowed 4 per cent. interest.
5. No Managing Agent and Head Office is at mill.

The Hindustan Sugar Mills, Ltd., Kheri.

Letter dated 6th October, 1937.

With reference to your letter No. 684, dated the 17th September, 1937, we beg to enclose herewith six copies of each of the following statements as required by you:—

(1) Replies to some questions of the General Questionnaire.
(2) Capital account and overhead charges.
(3) Form I*, total expenditure (Question 80, General Questionnaire).

Regarding Form I, as the grouping of some items of expenditure in our accounts is different from what has been mentioned in the Form, it has been possible to give only approximate figures for such items. But care has been taken to see that they are correct so far as possible. Total expenditure, of course, tallies with our accounts.

You will further see that the amounts of the sales expenses and Excise duty do not correspond with the output of sugar in each year. This is because our figures are of actual payment, which includes sugar stocks of each preceding year.

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Enclosure.

REPLIES TO SOME QUESTIONS OF THE GENERAL QUESTIONNAIRE.

1. This factory started manufacture of sugar in the year 1932. Its present full capacity is sixteen hundred tons of cane per day.

2. Regarding output of this factory for each of the last five years *see* "Weight of sugar made in Form I"* (Question 80, General Questionnaire).

3. Double sulphitation process.

4. The capacity of this factory was more than doubled in the year 1934, by adding one complete tandem of 15 rollers, three boilers, pans, evaporators centrifugal machines, etc. A new house for installing the additional milling plant and boilers was constructed, while the pan and evaporator house has been kept common for both the milling units. Centrifugal machines which were previously installed in the pans and evaporator house, were shifted to a new house and the new batteries of centrifugal machines were added to them. Thus the layout of the factory was changed to a very great extent.

As regards amounts spent on extensions, *see* reply of item "(*d*) renewals and additions" under the heading Capital Account and Overhead Charges.

5. At present, we do not contemplate any further extension or replacements.

---

*Not printed.

6. Sugarcane cultivation by the factory being only nominal, we are unable to furnish the required figures.

7. Duration of the crushing seasons since the factory started has been as under:—

Season.	Date of starting.	Date of closing.
1932-33	23rd November	8th May.
1933-34	7th November	27th May.
1934-35	10th December	24th April.
1935-36	12th November	31st May.
1936-37	1st December	17th May.

In the season 1933-34, it was an exceptionally good crop. The season 1934-35 has been short, as the sugarcane was affected by severe frost; besides owing to increase in gur prices, large quantity of cane was converted into gur. As regards the season 1936-37, the factory was not started in November, in pursuance of the resolution of the Indian Sugar Mills Association, so that the general carry over of sugar stocks may be reduced.

7. Stocks of sugar have been as under:—

Season.	At the beginning of the crushing season.	At the end of the crushing season.
	Bags.	Bags.
1932-33	...	...
1933-34	130	16,337
1934-35	422	31,571
1935-36	641	118,244
1936-37	536	70,013

9. We have increased our sugar storage capacity in recent years.

10. Whatever reduction in working costs has been made since the factory was started in 1932, it has been mainly due to increased cane crushing by extending the plant. It is not possible to apportion separately how much reduction in costs has been due to each item.

Capital Account and Overhead Charges.

1. (*a*) Block Capital in 1932-33—Rs. 12,30,748-14-1.

(*b*) Block Capital in 1936-37—Rs. 27,51,034-7-6.

(*c*) Sum set aside for depreciation during this interval—Rs. 6,08,300.

(*d*) Renewals and additions during this interval:—

	Rs.	A.	P.
(i) Lands	7,124	8	0
(ii) Buildings	1,27,372	8	0
(iii) Plant and Machinery	13,21,265	6	5
(iv) Other assets	64,523	3	0

2. The amount set aside for reserve fund including debenture sinking fund during the last five seasons is Rs. 10,50,000. The whole of this fund is invested in the business.

3. We have got only ordinary share capital. There is no deferred or preferred capital. Dividend has been distributed on ordinary share capital as under:—

Year.	Amount.
	Rs.
1933	50,000
1934	60,000
1935	60,000
1936	75,000
1937	75,000 (expected)

4. Working capital is provided by means of debentures and cash credit account with a bank against sugar stocks and partly by the Managing Agents also. From the bank, working capital is available at Bank rate.

5. The Managing Agents' Commission has been paid as follows:—

Season.	Rs.	A.	P.
1932-33	30,013	3	8
1933-34	79,892	2	3
1934-35	38,184	0	6
1935-36	70,264	7	6
1936-37	51,138	2	6

The Managing Agents' commission is determined by a fixed percentage on profits which remain after deducting all charges including interest on working capital Excise duty, etc., but before setting aside any sum for depreciation, reserve fund or capital account and also before making provision for income-tax and super-tax and payment of dividend on share capital.

The figures of the actual amount of commission due and the amount of commission paid are the same, that is, the actual amount of commission due has been fully paid.

Head office expenses excluding Directors' and Auditors' fees have been about Rs. 7,000 annually.

Rosa Sugar Works and Distillery, Shahjahanpur.

Letter No. 7743-C., dated the 30th September, 1937.

As requested in your letter No. 684 of 17th instant, we enclose a note of our replies to the Questionnaire enclosed therein.

The Balance Sheet for 1936-37 has not yet been issued but since it includes the working of three distilleries as well as Rosa Sugar Factory, this Balance Sheet can be of little use to the Tariff Board in its investigations.

Enclosure.

REPLIES TO THE QUESTIONS.

1. Rosa Sugar Factory commenced manufacturing sugar in 1839. The capacity of the factory is 650 tons cane per day.

2. Outputs for last seven years:—

	Maunds.
1930-31	56,349
1931-32	98,278
1932-33	126,632
1933-34	123,882
1934-35	157,093
1935-36	198,722
1936-37	155,250

3. We use the sulphitation process.

4. The original plant was a 6 roller 300 ton unit. This was extended in 1926 to a 11 roller 400 ton unit by the addition of a crusher and one mill. Since 1930, the original plant was replaced by a modern 6 roller unit and this with the 1926 unit and cane knives increase the capacity to 650 tons. The boiling plant and centrifugals were also increased to cope with the increased crushing capacity. The cost of extensions amounted to Rs. 6,00,000.

5. We intend scrapping and replacing all plant dating before 1930.

6. Yes.

(*a*) 600 acres.

(*b*) At present only 30 acres but we hope to have 200 acres under cane each year.

(*c*) Cos. 5, Co. 312, Co. 313, Co. 350, Co. 331, Co. 285, Co. 385 and Co. 421.

(*d*) 1st year—Cane—Green manuring sulphate of Amonia.
2nd year—Fallow.
3rd year—Wheat.
4th year—Cane as before.

(*e*) 700 maunds per acre from each variety and 15 per cent. sucrose.

(*f*) Approximate Rs. 200 per acre as under:—

	Rs.	A.
Ploughing	25	0
Sowing	5	0
Green Manure	2	8
Trenching	7	4
Cultivation	7	4
Sulphate of Ammonia	14	0
Rent	48	0
Irrigation	15	0
Hoeing	25	0
Cutting and Stripping	22	0
Carting and Conveyance	11	0
Banking Trenches	7	0
Watchmen	10	0

7.

1930-31	15th December, 1930, to 28th March, 1931.
1931-32	30th November, 1931, to 23rd April, 1932.
1932-33	16th November, 1932, to 30th April, 1933.
1933-34	20th November, 1933, to 14th April, 1934. Shorter crush due to cane supplies becoming exhausted through outside factories invading our area.
1934-35	12th November, 1935, to 24th April, 1935.
1935-36	18th November, 1935, to 6th May, 1936.
1936-37	11th December, 1936, to 3rd April, 1937. Short crush occasioned by shortage of cane owing to floods.

8. Figures for last four years only available:—

	Stock at beginning.	Stock at end of season.
	Maunds.	Maunds.
1933-34	3,412	50,435
1934-35	*Nil*	79,132
1935-36	3,371	152,930
1936-37	11,156	89,313

9. Increased storage capacity to 150,000 maunds.

10. The works cost of the factory has been reduced from Rs. 4·95 in 1930 to Rs. 1·87 in 1936 per maund of sugar produced. This reduction has been effected mainly by increasing the output of the factory.

Capital Account and Overhead Charges.

The information required under this head cannot be given with any degree of accuracy as the accounts include the working of three distilleries who contribute very materially to the profits of the company. This company is mainly concerned in distilling and the sugar factory is not solely responsible for its profits or losses. The large distillery at Rosa bears a very considerable proportion of the on-cost on the whole concern and all expenses on the sugar factory are very much reduced by its connection with the distillery. Such being the case, the sugar figures of this company are of little use in an enquiry by the Tariff Board since such figures are purely arbitrary. This also applies to the figures required in Form I.

H. R. Sugar Factory, Ltd., Bareilly.

Letter dated 6th October, 1937.

With reference to your letter No. 684, Tariff Board of the 17th September, 1937, we beg to enclose herewith, as desired, our statements giving informations called forth by you *vide* questionnaire and Form I received with your abovequoted letter and hope, the same would be found to serve your purpose alright.

It may be mentioned here that in the statements referred to above, we have not been able to give you the figures for the year 1932-33—the very first year of our establishment and the chief cause of this is that as did not happen to be a limited liability concern then, the figures could not be procurable. We hope, however, that you would kindly not misunderstand us and excuse our inability in this instance.

Further, our accounts for the season 1936-37 have not been audited yet and hence the Balance Sheet for this year is not yet ready and therefore cannot be sent. We may inform you that the audit of our accounts will commence in the last week of this month and consequently the Balance Sheet will be prepared only after the audit is complete.

Enclosure.

1. (*a*) 1932-33.

(*b*) The maker's guaranteed capacity of our plant is 500 tons but we have been able to increase the capacity year by year without making any addition to the milling plant and now the actual crushing capacity is 750 tons per day of 24 hours which we crush.

	Season.	Output. Maunds.
2.	1933-34	184,628
	1934-35	186,282
	1935-36	256,228
	1936-37	287,070 sugar.

3. Single Sulphitation.

4. (*a*) No change has been made in the layout of our factory. The following additions have of course have been made in the original plant to improve and facilitate boiling house work:—

7 Centrifugals,
1 Crystallizer,
1 Seed Mixer,
8 Settling tanks,
1 Rota Massecuite Pump,
1 Air Compressor, and
1 Molasses tank.

Similarly to improve the working of boilers, one boiler was added to serve as a standbye; the chokeless pumps not being found suitable, had to be changed with proper ones. Nine new rollers were purchased to replace the existing ones with a view to improve extraction. Other miscellaneous replacements of minor nature were also made wherever necessary such as pipings, staging, etc.

(*b*) The total amounts spent on extensions from 1st September, 1933, to 1st September, 1936, are Rs. 1,88,824-4-3.

5. We are contemplating no extensions but to facilitate the existing working difficulties we are adding for use in the coming season:—

1 Juice Heater,
1 Magma Pump,
1 Magma Mixer,
2 Molasses tanks,
1 Raw Juice Pump,
1 Michaelis traps,
1 Seed crystallizer, and
1 Screw Conveyor.

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6. We do not undertake cultivation of sugarcane.

	Season.	Duration.
7.	1933-34	5th November, 1933, to 3rd May, 1934.
	1934-35	15th November, 1934, to 30th April, 1935.
	1935-36	16th November, 1935, to 16th May, 1936.
	1936-37	19th November, 1936, to 25th May, 1937.

The duration of season depends mostly on the availability of cane. So in any year if there has been supply of cane in full quantities the season has been of longer duration and if there has been lesser supply the season has been of a shorter duration.

8. *Vide* separate statement attached (Appendix).

9. Yes, one godown capable of holding about 15,000 bags had to be increased in 1935-36 season. We do not contemplate making any further extension at present.

10. Working cost per maund of sugar, *i.e.*, total cost excluding price of cane depreciation and excise duty:—

	Rs.	A.	P.
1933-34	1	14	0
1934-35	1	11	0
1935-36	1	4	5
1936-37	1	3	4·25

Now we are of opinion that no further reproduction in working cost is possible. This reduction in cost has mostly been brought about by being able to effect more and more crushing year by year and improving sugar recovery, extending crushing days, and by curtailment of overhead expenses as much as possible but to what extent each of them contributed towards the general reduction in cost is not possible to give at this stage.

Capital Account and Overhead Charges.

	Rs.	A.	P.
1. (*a*) Land and Building	4,00,271	4	9
Plant and Machinery	14,25,648	3	6
Furniture and Fixtures	13,271	12	9
Motor Car and Conveyances	2,000	0	0
	18,41,191	5	6

(*b*) Figure as on 1st October, 1936:—

	Rs.	A.	P.
Land, Building, Siding and Drain	4,31,988	14	6
Plant and Machinery	15,69,684	4	6
Furniture and Fitting	14,526	11	3
Motor Car and Conveyances	13,815	11	0
	20,30,015	9	3

(*c*) Rs. 4,36,114-12-9 provided in a separate Depreciation Account.

(*d*) Cost—Rs. 1,88,824-3-9.

2. We did not set aside any reserve fund.

3. We have only one kind of Capital:—

Dividend for	Free of tax. Per cent.
1933-34	14·5
1934-35	3
1935-36	12

4. The whole capital has been subscribed by the Shareholders of the Company. No part of the working capital has been borrowed.

5. We have not got a separate head office. We are not paying any commission to Managing Agents who in our case is an honorary Managing Director.

APPENDIX.

Statement showing the stock balance of sugar at the beginning and closing of each crushing season from the year 1930.

Year.	Beginning.			Closing.		
	Date.	No. of bags.	Weight.	Date.	No. of bags.	Weight.
			Mds. Srs.			Mds. Srs.
1930	..	..	..	..	..	..
1931	..	..	..	..	..	..
1932	7th December 1932.	*Nil*	*Nil*	*Nil*	*Nil*	*Nil.*
1933	9th November 1933.	*Nil*	*Nil*	1st May 1933.	16,583	44,981 16
1934	17th November 1934.	2,775	7,527 7½	2nd May 1934.	9,395	25,483 37½
1935	20th November 1935.	19	51 21½	30th April 1935.	23,858	64,416 22½
1936	23rd November 1936.	9,117	24,119 36½	18th May 1936.	33,595	90,668 29½
1937	..	..	..	31st May 1937.	40,041	107,230 12½

Diwan Sugar Mills, Meerut.

Letter dated 5th October, 1937.

We beg to enclose herewith the answers to the extract from General Questionnaire, (2) Capital Account and Overhead Charges, (3) Form No. 1 duly completed (Six copies each) as desired by you in your circular dated 17th ultimo.

Enclosure.

ANSWERS TO THE EXTRACT FROM GENERAL QUESTIONNAIRE.

1. Our mills commenced crushing and manufacturing sugar on the 8th January, 1934, with three hundred tons as its original capacity.

2. The output of the factory during each year is hereunder detailed:—

Season.	Output in maunds.
1933-34 . . .	The information cannot be given as the record is away.
1934-35 . . .	63,950
1935-36 . .	94,895
1936-37 . . .	131,426

3. Double Sulphitation.

4. After the start of the factory:—

. Two Pans, two Juice heaters, three Filter Presses, three Boilers, Cush-cush Elevator, were added.

5. The crushing capacity of our mills being less than the capacity of our boiling house, we contemplate to increase the capacity of our crushing plant.

6. No.

7. The duration of the crushing season for each year is hereunder given. The variations were due to the sugarcane crop conditions:—

Season.	
1933-34 .	The record being away the information cannot be given.
1934-35 .	15th November, 1934, to 28th March, 1935.
1935-36 .	7th November, 1935, to 4th April, 1936.
1936-37 .	6th November, 1936, to 14th April, 1937.

8. The figures showing stocks of sugar at the beginning and at the end of each season is hereunder given:—

Season.	Stock in the begining of season.	Stock at the end of season.
	Mds. Srs.	Mds. Srs.
1933-34 . . .	The record being away, the information cannot be supplied.	
1934-35 . . .	*Nil*	104 5
1935-36 . . .	104 5	183 15
1936-37 . . .	183 15	231 20

9. No.

10. The table showing cost of production each year on one maund sugar is hereunder mentioned. The variations were due to reasons of extension in plant, installation of efficient machinery, and reducing overhead charges. It is, however, not possible to classify as to how much reduction was due to a particular reason.

Season.	Manufacturing cost on one maund sugar.
	Rs. A. P.
1933-34	The record being away, the information cannot be supplied.
1934-35	3 0 3
1935-36	2 8 0
1936-37	1 10 9

Capital Account and Overhead Charges.

1. The information is hereunder given:—

	Rs.
(*a*) Block Capital up to 8th January, 1934 . .	8,07,697
(*b*) Block Capital up to season 1936-37 . .	9,40,912
(*c*) Depreciation written off during this interval .	1,96,321
(*d*) Renewals and additions during this interval—	
(*a*) Lands	3,379
(*b*) Buildings	2,967
(*c*) Plant and Machinery	1,26,119
(*d*) Other Assets	750

2. No.

3. Our being a proprietory concern, and not a liability limited company the question does not apply.

4 & 5. Ditto.

Jaswant Sugar Mills, Meerut.

Letter dated 27th September, 1937.

We are in due receipt of your letter dated 17th September, 1937, together with an Extract from General Questionnaire. We are sorry that we are not in a position to give you full information as our factory was originally started and worked for 2 seasons by Messrs. the Indra Sugar Works, Ltd., which company went under compulsory liquidation and all the records thereof are now in possession of Official Liquidators, Allahabad High Court. However, we are enclosing herein our answers to those questions only for the year 1935-36 and 1936-37 when we worked the factory.

As regards Form No. 1 (Total Expenditure) under Question No. 80 we already submitted complete figures to the Indian Sugar Mills Association which we hope you must have duly received.

Hoping you will find this in order.

Enclosure.

REPLIES TO AN EXTRACT OF GENERAL QUESTIONNAIRE.

1. We worked the factory for the first season during 1935-36. Its capacity is 300 tons of cane per 24 hours.

2. During the 2 seasons that we worked we produced 64,365 maunds and 126,862·3 maunds of sugar during 1935-36 and 1936-37 respectively.

3. The process used is Double Sulphitation.

4. Since we took over the above factory we have replaced most of the electric-driven pumps by those of steam-driven and of higher capacity as the original ones could not do for the purpose.. We have also added to the above, Evaporation plant, Boiling plant, Filteration, Centrifugals and many small parts here and there. By these additions we hope to improve upon the quality of our sugar as well as add to its efficiency. So far we have spend in additions and replacements about Rs. 1,00,000 (one lakh).

5. We intend to increase the crushing capacity as well in the near future and seriously contemplate to replace the present electric-driven plant by a big steam-driven one.

6. No.

7. In the year 1935-36 we crushed for 94 days and in 1936-37 for 154 days. During the last year the period was sufficiently long for economic working although before that, mills in our area were always handicapped for their short working seasons.

8. Our stock in the beginning and end (Total production) of each crushing season that we worked is as follows:—

	1935-36 Maunds.	1936-37. Maunds.
Beginning	...	...
End	64,365	126,862·3

9. Yes, we have doubled our storage capacity only this year.

10. We have tried to increase our efficiency by extending our boiling house with machinery at the various stages of the manufacture.

Capital Account and Overhead Charges.

1. (*a*) The factory was originally started with a capital of about nine lakhs by Messrs. Indra Sugar Works, Ltd., now under compulsory liquidation and was sold to us in 1935 for Rs. 4,40,000.

(*b*) Our Block Capital for 1936-37 was Rs. 5,50,000.

(*c*) Depreciation during the year 1935-36 was Rs. 28,701-4-6.

(*d*) (*a*) None.

(*b*) Rs. 10,000.

(*c*) Rs. 80,000.

(*d*) Electric Installation—Rs. 10,000.

2. None.

3. Does not arise.

4. The working capital is provided by an arrangement with Bank against stocks of sugar at 5 per cent. per annum.

5. We don't have any Managing Agents, hence the question does not arise.

The Ganga Sugar Works, Bijnor.

Replies to Questionnaire for Sugar Refineries.

1. The factory was erected in 1933 as a sugar refinery with maximum capacity of refining 400 maunds of gur or rab (massecuite) per day. Owing to high prices of gur and low price of sugar comparatively, it did not work in the season 1934-35. Subsequently, a six-Roller Mill for crushing cane and a set of Open Pans for concentration of juice was added to work as a cane plant with a maximum crushing capacity of 80-90 tons of cane per day.

2. We intended to use local made gur and rab, which is available in sufficient quantities, but economic conditions were unfavourable as explained above.

3. The output of sugar has been as follows:—

Season.	Maunds.
1935-36	5,113
1936-37	12,756

4. Cane is obtainable in sufficient quantities and at ordinary rates, but in the present circumstances gur at sufficiently cheaply rates is not obtainable.

5. Sources of supply of cane is entirely local. The method of transportation is by cart.

6. Average recovery for the two seasons is as under:—

	Per cent.
1935-36	7·45
1936-37	8·36

12. We think, Refineries have very little chances to operate in competition with cane plant. Since our experience with a cane plant is very limited, we regret, it is not possible to offer replies in detail to the General Questionnaire.

Baijnath Balmakund Sugar Mills, Cawnpore.

Letter dated 18th August, 1937.

With further reference to our letter No. 8002, dated the 19th ultimo and as desired in your letter No. 6-T., dated the 12th ultimo, we have now the pleasure to send you our replies to the General Questionnaire issued by you in six spare copies, attached hereto, which we trust you will find in order.

We regret very much for the delay which was due to the absence of the undersigned from the Headquarters as was already intimated to you in our letter No. 8002, dated the 19th ultimo.

Enclosure.

REPLIES TO QUESTIONNAIRE FOR SUGAR REFINERIES.

1. Our Factory commenced manufacturing in the year 1910 and the maximum capacity is 450 maunds of sugar per day. Our Factory refines jaggery only.

2. We refine sugar from jaggery and produce one quality only.

3. Our output in the year 1936-37 was 94,000 maunds and prior to that our Factory was run by Messrs. Jagdish Prasad Sarwanlal of Cawnpore and so we are unable to give you the figures for the period prior to 1936-37. The question of variation consequently does not arise.

4. We are not able to obtain sufficient quantity of jaggery for the reasons that the cane is crushed in great quantity and the jaggery powder is not being prepared by the cultivators as they do not get better prices for the same. We purchase jaggery at Rs. 2-13 and jaggery powder at Rs. 3-13-6 per maund respectively.

5. We purchase through Commission Agents in jaggery centres. Jaggery thus purchased is transported to us by rail.

6. During the year 1936-37 our percentage was 55·48 and for the period prior to it, our remarks made in paragraph No. 3 should stand. (*a*) If more attention is paid to the manufacture of jaggery, a better percentage can be expected. (*b*) Every precaution is taken to secure as high a percentage in refining as is possible and there is no possibility of an increase in percentage from the present quality of the jaggery.

7. During the year 1936-37 our manufacturing cost was Rs. 1-7-3 per maund as per calculation arrived at by the following figures:—

	Rs.	A.	P.	
Salary and Wages	32,660	11	6	All dividend by 94,000 comes to Rs. 1-3-8 per maund.
Stores, Coal and Electric	47,853	6	9	
Packings	18,704	14	0	
Cartage	7,118	14	3	
Railway Freight	1,042	5	3	
Bhagela, etc.	6,372	7	0	
	1,15,469	1	6	

	Rs.	A.	P.	
Selling Expenses	8,916	6	0	Divided by 94,000 comes to As. 3-7.
Interest	12,293	6	3	
	21,209	12	3	

8. Our quality during the year 1936-37 was similar to other Gur Refinery Factories of India, which are very limited in number and the prices also were in level with them.

9. We supply to our Agents, Messrs. Kashiram Kanhaiyalal, Nayaganj, Cawnpore, and they supply mostly to Central India, Central Provinces, and also to other parts. A detailed list of stations to which they have despatched the goods along with Railway Freight for those stations, is attached hereto in six spare copies for your information.

10. The output of Molasses during the year 1936-37 was 68,853 maunds and the prices for which were Rs. 27,118-4-6.

11. The increase of Excise Duty has affected very much the sugar trade and especially sugar manufactured from jaggery.

12. Excise Duty for sugar manufactured from Cane should be different from that on sugar manufactured from jaggery. (*a*) The Railway Freight should be a special concession rate for the jaggery from the jaggery centres to our sidings. (*b*) The rates of Railway Freight should be special for sugar despatches to sugar centres.

Detailed list of stations to which the sugar have been despatched and the Railway Freight for those stations.

Stations.	Rate.			Stations.	Rate.		
	Rs.	A.	P.		Rs.	A.	P.
Karui . . .	0	5	6	Umreth .	1	2	4
Rani . . .	1	0	8	Jeonardeo . .	1	2	5
Namli . . .	1	0	1	Datia . .	0	6	4
Atarra . . .	0	4	10	Jubbalpur . .	0	12	0
Marunpali . .	1	1	2	Nardana . .	1	7	11
Manmath Road .	1	8	4 &	Jhansi . .	0	5	10
	0	6	8	Sehore Cantt. .	0	13	0
Burhanpur . .	1	3	6	Piparia . .	0	15	7
Shaiamgarh .	1	0	0	Murar Cantt. .	0	7	11
Mauranipur . .	0	6	9	Drug . . .	0	12	0 &
Phulera . . .	0	13	4		0	8	7
Khurwai Kathora	0	9	4	Saugor . . .	0	10	9
Elgin Club . .	0	7	11 &	Achalda . .	0	3	5
	0	6	8	Khurai . .	0	9	7
Mandsaur . .	1	1	3	Mandla Fort .	0	12	0 &
Neemuch . .	1	0	11		0	4	0
Orai . . .	0	3	7	Karak Bel . .	0	13	6
Jodhpur . .	1	2	3	Bohani . .	0	14	6
Salamatpur .	0	11	4	Kotah . .	0	14	0
Kulpahar . .	0	5	8	Bundi Road . .	0	13	10
Mhow . . .	1	1	6	Dhamangaon .	1	7	1
Kurdwali . .	2	1	2	Balotra . .	0	13	3 &
Baren . . .	0	11	3		0	7	3
Warseoni . .	0	10	3 &	Bina . . .	0	8	11
	0	15	0	Nasirabad . .	0	14	11

Stations.	Rate.		
	Rs.	A.	P.
Lalitpur	0	7	9
Salpura	0	13	4
Patheria	0	11	10
Samhar	0	13	6
Etawah	0	4	0
Bhatapara	0	9	9 &
	0	8	11
Indore	1	1	4
Hosangabad	0	13	9
Phaphund	0	2	11
Utripura	0	2	6
Lalganj	0	3	1
Kareli	0	4	4
Karaunda	0	8	8
Sahdol	0	10	1 &
	0	10	5
Rajnandgaon	0	11	4 &
	0	7	11
Kapren	0	12	9
Nasik Road	1	10	3
Sri Amirgadh	1	1	5
Multapi	1	1	5
Errach Road	0	4	4
Lakheri	0	12	2
Grupura Road	1	0	10
Banda	0	4	0
Maholla	0	5	2
Abu Road	1	1	4
Sarupganj	1	1	2
Beawar	0	15	7
Ajmer	0	14	5
Sojat Road	1	0	2
Nankahar	1	2	9
Ichauli	0	3	8
Nana	1	1	0
Kalpi	0	2	10
Chirgaon	0	5	1
Auraiya Tahsil	0	4	0
Raghaul	0	3	5
Bamora	0	9	6
Khandwa	1	2	0
Sanawar	1	1	10
Purbi Vaijnath	1	8	8
Bilaspur	0	9	5 &
	0	7	7
Gotegaon	0	12	2
Chindwara	0	12	0
Itwari	1	4	1

Stations.	Rate.		
	Rs.	A.	P.
Moth	0	4	7
Chandur	1	7	5
Khaga	0	3	8
Konch	0	4	2
Harda	0	15	10
Brahampuri	0	13	0 &
	0	8	4
Satna	0	7	11
Manikpur	0	6	2
Katni Murwara	0	10	1
Harpalpur	0	6	4
Gurumkhedi	0	15	0
Jais	0	6	6
Tarbihat	0	6	11
Chaumahla	1	1	3
Akodia	0	14	2
Parmar	1	5	11
Baret	0	9	11
Sajan Road	1	1	3
Naila	0	10	1 &
	0	8	6
Someshwar	0	15	11
Aga Soth	0	9	11
Mainpur	0	7	4 &
	1	0	3
Bikaner	0	13	3 &
	0	0	8
Mohidpur	1	0	6
Damoh	0	12	5
Jalore	0	13	3 &
	0	7	9
Loban	0	12	4
Barwasagar	0	6	3
Nathdwara	0	15	11 &
	0	2	10
Batool	1	0	6
Bharthana	0	3	7
Udaipur	0	15	11
Chitara	0	7	2
Nagaur	0	13	3 &
	0	4	5
Indergarh	0	12	0
Warsi	0	14	11
Seoni	0	12	0 &
	0	5	0
Pandhura	1	2	4
Deogadbadia	1	1	2 &
	0	1	5

Stations.	Rate. Rs.	A.	P.	Stations.	Rate. Rs.	A.	P.
Antah	0	14	9	Gotan	1	0	7
Deorakhera	0	10	0	Ruttlam	1	0	11
Neembahera	1	0	9	Marwarpali	1	1	2
Nizamabad	1	8	0 &	Malkapur	1	5	0
	0	10	11	Sewalia	1	2	2
Erandel Road	1	5	11	Kanchausi	0	2	10
Rajpipla	1	4	5	Marwarbagra	0	13	3
Narsinghpur	0	13	10	Kanuaj	0	3	5
Dohad	1	1	7	Raipur	0	10	0 &
Pariawan	0	4	1		0	9	5
Pachora	1	6	3	Gursahai	0	3	9
Bamania	1	1	2	Kapasin	0	15	11
Ujjain	1	0	3	Jaora	1	1	1
Gadguchlot	1	0	4	Arui	1	8	2
Jaswantnagar	0	4	5	Wadi Bunder	0	14	9
Taran Road	1	15	0				

Kamlapat Motilal Gutaiya Sugar Mills, Cawnpore.

1. The factory actually commenced its operations in the year 1910 (one thousand nine hundred and ten) as a Limited Company under the name and style of the "Union Indian Sugar Mills Co., Ltd.". In the year 1932 it came to our possession and now is known as "Kamlapat Motilal (Gutaiya Sugar Mills)".

The maximum capacity of our Mills is 3,000 maunds (Jagree Melting) per day.

It is purely a Refinery and does not crush cane.

2. We generally refine sugar from Jagree (Gur) but sometimes we use Rab and Jagree Powder as our raw material.

We manufacture only one quality of sugar which is known in the markets as "Gutaiya Crushed". Whenever we use Rab or Jagree as our raw material, we make brown crystals.

3. As the factory came to our possession in the year 1932, we regret very much we have no record for the previous dates.

The output of sugar is as under:—

Year.	Quantity. Maunds.
1932	214,730
1933	386,483
1934	376,695
1935	403,268
1936	416,400

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The causes of the variations put in order of merits are:—

(*a*) Variations in the quantity of raw materials purchased.
(*b*) Variations in the quality of raw materials.
(*c*) Extension of the mills.
(*d*) Improvement in the manufacturing process.

The last item does not play an important part in causing the variations in the output. Undoubtedly, the improvements in the manufacturing process increase the output of the finished product in the outset but its effect diminishes as further improvements take place. As the improvements in the process of manufacture are being introduced every year since the protection has been given to the industry in 1932 and now they have reached to the state where further improvements would not prove fruitful.

4. Yes, we get abundant supply of raw materials. The rate at which we purchased our raw material is as under:—

Year.	Rate per Maund *Ex*-Purchasing Stations.		
	Rs.	A.	P.
1932	2	9	3¼
1933	2	8	5¾
1934	2	10	1·8
1935	3	7	3¾
1936	2	12	11½

The rate does not include freight to Mill-siding (Rawatpur Station on Bombay, Baroda and Central India Railway) which is a very prominent head of expenditure.

5. We use to send our own men to the various purchasing centres which are in the United Provinces and Bihar to purchase raw materials through local agents. The Jaggery is brought to the purchasing centres by the cultivators and the country traders in their own bullock-carts.

The chief means of transportation of Jagree (Gur) from purchasing centres in United Provinces and Bihar to Factory Siding is the Railways.

6. The average recovery of our sugar since the factory came into our possession is as follows:—

Year.	Recovery Percentage.
1932	50·77
1933	52·72
1934	54·23
1935	57·91
1936	59·09

(*a*) The question of the improvement in the method of manufacture of raw material is beyond the control of the sugar manufacturers. The stock of cane carried by the growers is converted into Jagree (Gur) irrespective of the demand for it by the sugar manufacturers in their own crude and conservative manner. Undoubtedly, these clumsy methods employed in the manufacture of jagree are most uneconomical and wasteful. Certainly, there is a wide field of improvement both in the quality of jagree and in the extraction of juice which is likewise extracted in the old fashion. The Jagree of different places is of different purity. Some places produce jagree of high purity while the others of low purity.

We understand that so far the Government have taken no initiative to introduce the refined ways of making Jagree nor the Imperial Institute of Sugar Technology, India, seems to have made any research in respect thereto and if any research in this direction has been carried out the same must have been confined to the Laboratory walls of the Institute.

Unless the Government take active part in this direction, we are afraid, no improvement can ever be possible.

(*b*) As has already been explained under 3 (*c*) the improvements have reached such an extent where there is little scope for further improvement and if carried they might begin to show "Diminishing Returns".

8. Our sugar as is the case with all sugar refined from Jagree is much inferior in quality and colour to the factory sugar and is just near the Khandsari Sugar.

The average rates, we obtained for our sugar is as under:—

Year.	Rate per Maund. Rs.	A.	P.
1932	9	1	1
1933	8	12	10·5
1934	8	5	11·4
1935	8	13	1·4
1936	7	12	2·3

9. We command an extensive market for our sugar in United Provinces, Central Provinces and Rajputana but as the industry is declining owing to the death blows it is receiving, the market is also contracting.

A list of the main stations to which we forward our sugar is enclosed herewith showing the freight rate of Railways per maund.

10. The output of Molasses is as under:—

Year.	Output. Maunds.
1932	162,403
1933	274,775
1934	285,068
1935	242,777
1936	248,984

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11. (*a*) The Excise Duty effected the Gur Refineries most adversely. There was very little margin left to the industry prior to the imposition of Excise Duty. The Duty cut that small margin to which the manufacturers contended and there remained two alternatives left before them, *viz.*, either to run the Mill without margin or to close it down for good. There would be no exaggeration if we say that the Duty of 1934 is the stepping stone of the "Down-fall" of the Industry and in reality the weaker factories were thrown off the field.

The Duty besides checking its growth discouraged the manufacturers so much that they gave up every efforts to make any improvements in the process of refining.

The Era of the closing down of the Refineries began.

(*b*) With the imposition of the Excise Duty of 1934 the down-fall of the well patronised industry began but the extra burden loaded by the Government on the industry was so heavy that it cracked its back-bone. To corroborate the truth of the statement, we take the case of Cawnpore where 4 Gur Refineries situate and out of these 4 Refineries two have been closed down completely and the other two will run only quarter of the season. We are sure that if the market-tone does not improve the Refinery industry will be ruined for all.

The Duty has not only affected the industry but has also affected the agriculturists and the labour class. Just as the development of the industry brought prosperity to the peasantry similarly its ruin will render them helpless. The cultivators of the places which are remote from Cane-factories areas and where easy and rapid means of transportations are not available, convert their cane into Jagree (Gur) to earn easy bread, would, of course, die of starvation if such a cherished industry is allowed to go to gallows.

12. Owing to the low standard of living India wants cheap things. It is an open fact that the cane sugar is superior in quality or in whiteness to Gur Sugar (Refinery's Sugar) and owing to low manufacturing cost is cheaper at the same time. But there is still a class of consumers which irrespective of the defects mentioned hereabove give preference to Refinery's sugar.

As a matter of fact the Refineries have been thrown into a gap formed by the cane-factory sugar and the Khandsari Sugar. The latter practically has not to pay any Excise Duty as it somehow or other escapes from it. In quality of the Khandsari and the Refinery sugar is practically the same but it (*i.e.*, Khandsari Sugar) enjoys much more advantages over the Refinery's Sugar—

Firstly.—It manages to escape from the Grip of the Excise Duty Act.

Secondly.—It does not come into the claws of the Factory Act.

Under the circumstances the refineries want some special facilities such as:—

(*a*) the excise duty on the Refineries sugar be reduced and brought to the level of the Khandsari Sugar or there be a difference of 8 annas per cwt. in the Excise Duty of the canesugar and Refinery's sugar.

(*b*) the special freight concession should be given to the Jagree consigned to the Refineries for the *bonâ fide* manufacture of sugar recently Cane-factories have enjoyed ample freight concession facilities but it were never extended to the Refineries).

(*c*) Some internal protection should be given to this industry to save it from the unfair competition of cane-factory sugar.

If the present Policy be allowed to continue then there is absolutely no doubt that the industry will be ruined and the owners and the shareholders of the Refineries will suffer heavily. Poor cane-growers will be left entirely on the mercy of the Cane-factories and the cane-growers of the area remote from the factories will certainly die of starvation as the refineries are going to be closed down very fastly every year as is obvious from the report of the Director of Imperial Institute of Sugar Technology.

Cawnpore Sugar Works, Ltd., Cawnpore (Cawnpore Sugar Factory).

Replies to the Tariff Board Questionnaire for Sugar Refineries, 1937.

1. Cawnpore Refinery started operations in 1894 and the present maximum capacity is 2,000 maunds per day. We give below a table showing the increase in capacity during the past 7 years:—

Year.	Maunds per day.
1930	1,047
1931	1,260
1932	1,425
1933	1,678
1934	1,704
1935	1,782
1936	1,928

Gur only is refined and cane is not crushed.

2. (1) Sugar is refined from gur only.

(2) Only one quality of sugar is manufactured, *i.e.*, light brown crushed with a polarisation of 98·6.

3. The output at this unit for the past 7 years is as follows:—

Year.	Maunds.
1930	87,299
1931	192,246
1932	235,455
1933	279,958
1934	238,621
1935	150,312
1936	286,290

The increase is due to improvements in process and technical control, and also additions to plant with consequent increase in capacity.

4. As a rule we are able to obtain a sufficient quantity of raw material with the exception of the years 1930 and 1935 when prices of gur were high and that of sugar low and the margin did not justify operations on a large scale. Prices of raw material for the past 7 years are given below and have been calculated on an f.o.r. Cawnpore basis. They also include premiums we have paid for gur of good quality:—

Year.	Per maund.		
	Rs.	A.	P.
1930	5	9	6
1931	4	0	10
1932	3	12	5
1933	3	3	3
1934	3	7	10
1935	3	15	11
1936	3	6	5

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5. The main source of supply is from the Eastern United Provinces. For the major part raw material is procured through Contractors, although it has been the custom to purchase a certain amount at our Depôt at Siswa Bazar. Transport to rail head is by bullock cart and from then onward by the Bengal and North-Western Railway.

6. The average recovery of sugar per 100 maunds of gur for the past 7 years is as follows:—

Year.	Per cent.
1930	53·26
1931	50·75
1932	55·40
1933	54·25
1934	56·25
1935	59·81
1936	56·03

(*a*) There could be an improvement in the manufacture of raw material if the ryots could be persuaded to use a cheap activated carbon in order to improve clarification. The avoidance of colour formation in the early stages of manufacture would give a better finished product which would obtain a better price. This point has already been considered by the Sugar Technologist to the Government of India who carried out certain experiments with activated carbon manufactured from rice husks and cane fibre.

(*b*) Various improvements could be made in the Refinery plant, in order to increase recovery, by additions and alterations to machinery. These improvements have actually been carried out by us at a cost approximating Rs. 1,00,000 but due to the depressed state of the sugar market we have been unable, so far, to operate the new plant which although erected, is still idle.

7. Manufacturing costs are given in Appendix 1. The steady decrease in cost of manufacture is due to increased capacity and efficiency.

8. The quality of our sugar is equivalent to No. 2 cane factory crushed sugar and the prices obtained for the past seven years are as follows:—

	Per maund.		
	Rs.	A.	P.
1930-31	8	8	0
1931-32	9	4	5·7
1932-33	8	7	11·8
1933-34	8	1	1·5
1934-35	8	13	9·4
1935-36	8	5	11·5
1936-37	6	14	11

9. A list showing the various markets we supply, together with freight rates, is given below:—

Place.	Freight Rate.			Place.	Freight Rate.		
	Rs	A.	P.		Rs.	A.	P.
Akola	1	7	9	Jhansi	0	5	10
Kunch	0	4	2	Jaipur	0	12	0
Hirapur	1	7	5	Amalner	1	4	8
Bhusaval	1	4	8	Elgin Club	0	9	8
Burhanpur	1	3	6	Dondaiche	1	6	10
Mauranipur	0	6	9	Indore	1	0	11
Bhadli	1	4	11	Nandarbar	1	0	1
Mahoba	0	5	2	Wadibander	0	14	4
Ahmedabad	1	8	4	Nasik Road	1	4	5
Bamora	0	9	6	Panchora	1	5	9
Dakore	1	1	10	Rajkot	1	4	9
Erandal Road	1	5	11	Raver	1	3	11
Mandsaur	1	0	10	Savda	1	4	4
Derol	1	1	9	Sholapur	1	10	3
Dabhoi	1	1	4	Dwarka	1	9	8
Ujjain	1	0	0				

10. The output of molasses for the past 7 years is given below together with the prices obtained:—

Year.	Maunds.	Per maund. Rs.	A.
1930	57,315	2	8
1931	146,107	2	14
1932	161,420	1	4
1933	212,599	0	6
1934	238,622	0	3
1935	83,699	0	6
1936	192,775	0	6

11. The imposition of the first levy of Excise had some effect in not inducing unadvised expansion which would, however, have been better prevented by a system of licensing and zoning at the time protection was given, and in relation to a considered estimate of the demand existing for sugar in India. The latter imposition coincided with a period of abnormally low prices for sugar, which persists to-day. Owing to trade conditions the manufacturer, except for a very brief period, has not been able to pass on any share of the excise to the consumer. We have never understood why the cane-growing section of the industry has not been called on to bear some share of the excise. The industry could have accepted with comparative equanimity a levy on profits on a reasonable scale.

12. Refineries can only operate in competition with Sugar Factories if there is a sufficient margin between purchasing price of raw material and the selling price of the finished product in order to cover manufacturing costs and distribution expenses.

Phephna Sugar Factory, Ballia.

Reply to the Questionnaire for Manufacturers of Sugar by the Open Pan system and Khandsaris, dated the 24th June, 1937.

1. I manufacture sugar directly from cane. After crushing the cane the juice is obtained and boiled in large pans, then taken into crystallizers, the crystal being ready it is put into centrifugals and then the undried sugar is spread over ground for drying. It is ready sugar.

2. The growers come at the gate and get (purzi) for the date amount asked for according to the account register of the factory.

3. The average prices paid for one standard maund comes to 4 annas.

5. The amount of juice obtained in my factory is 50 per cent.

6. First and second grade sugar is prepared. The factory is working since the year 1934. The output during the period is on 1st grade Rs. 6, 2nd grade Rs. 4-8 per standard maund.

7. The cost has been calculated for all the three years containing coal, wages, etc., Rs. 55,012-8.

8. The only market of our sugar supply is the city of Ballia, where the sugar is sent by cart.

9. The prices obtained is Rs. 45,371.

13. The sugar duty of 1934 resulted in a small loss, but the duty imposed in 1937 was a great disadvantage and the loss unmindful in the circumstances when the rate decreased, the market became quite.

14 The industry being on a small scale has much difficulty to face, the operatives are not got on small wages, the factory competes in cane buying, the time is lost money is lost.

The management of obtaining juice, or competition of Factory weighbridges, duty not to be assessed in so much large sum.

The Pheona Sugar Works, Moradabad.

Letter dated 20th July, 1937.

In reply to the questionnaire issued by you I am sending herewith a report on the working of the Open Pan Sugar Factories which manufacture Khandsari sugar.

Further I am prepared to give you every sort of information that will be asked from me in this connection.

Enclosure 1.

OPEN PAN SUGAR FACTORIES.

The enhancement of Sugar excise duty has told a great deal on the Khandsari Industry. It might be possible for the vacuum pan sugar factories to bear it since they have higher extraction, higher percentages of sugar besides very little losses in boiling but it has upset the whole scope of expansion for the Khandsari industry which has been in India since times immemorial. Time was when people preferred it more because it was sweeter in taste than other sugar but now this industry is soon vanishing on account of the imposition of high rate of excise duty and opening of many central sugar factories. The production of Khandsari sugar has therefore come to a minimum than the previous years.

In our factory sugar is manufactured directly from cane purchased locally at a rate generally 6 pies less than the Government rate at which sugarcane is purchased at the station which is about six miles away from the factory. This year the rate of sugarcane were not affected by the gur prices. We have been working with Kirloskar crushers of which average crushing capacity for the whole season comes to 500 maunds a day after making allowances for rains, cloudy weather, holidays and breakages of machine parts. The juice of sugarcane is transferred by means of juice pump to the bels. When the rab is prepared here, it is allowed to rest in small tanks of pucca bricks for about a week and then it is centrifuged to sugar by means of centrifugals. From centrifugals sugar is taken to pattas and dried in sun by labourers then bagged and sent by bullock-carts to sugar market which is twenty miles away from the factory.

The figures of our working are given as under:—

Expenditure.

	Per month. Rs.	Per month. Rs.
1 *Steam Engine*—		
Mistri	40	
Fireman	16	
Khalasi	8	
Oilman	8	
	—	72
2 *Centrifugals*—		
1 Centrifuger	10	
6 Labourers	48	
	—	58
2 *Crushers*—		
4 Cane feeders	32	
4 Bagassemen	32	
	—	64

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	Per month. Rs.	Per month. Rs.
2 Juice Bels—		
A four months contract is given to six Karigars and Nikharas for Rs. 200 excluding food which comes to Rs. 30 per mensem.		
Karigaras and Nikharas	50	
	30 Food	
8 Jhonkas	64	
1 Supervisor	12	156
2 Molasses Bels—		
1 Head Boiler	15	
5 Extra labourers for Jhonk and aeration	40	55
On weighment of Sugarcane—		
2 Clerks	32	
4. Labourers	32	64
Miscellaneous—		
1 Cashier	30	
1 Chowkidar	8	
4 Pattawalas for drying sugar	32	70
Total		539

	Rs.	A.
Taking working days in a month to be 25 the labour per day comes to	21	9
Fuel Wood and Coal, Cylinder Oil, Castol Oil for boiler and engine and light	12	0
Total	33	9

	Rs.	A.
Oil, lime, sajji, chukalai for bels	1	8
Cost of 500 maunds of sugarcane at 3 annas 3 pies per maund	101	9
Carting of 29½ maunds of sugar to Dhampur Mandi at 2 annas	3	11
Total	140	5

Returns.

The average rab percentage in sugarcane is 11·5 per cent. and sugar percentage of rab is 40 per cent. Thus the sugar percentage in sugarcane is 4·6 per cent. and the remaining molasses is 6·9 out of which 5·2 maunds of molasses rab will be obtained at 75 per cent. The sugar percentage in the rab will be 1·3 maunds at 25 per cent.

	Rs.	A.
First sugar obtained in 500 maunds at 4·6 per cent. is 23 maunds at Rs. 5-8	126	8
Second sugar obtained in 500 maunds at 1·3 per cent. is 6·5 maunds at Rs. 4-4	27	10
Total .	154	2

If the work is carried on by electricity the figures will be as follows:—

	Per day.	
	Rs.	A.
Electric charges according to the consumption of 225 units per B.H.P. per month of 25 days working 12 hours per day at 1 anna 6 pies per unit for a motor of 20 B.H.P.	11	4
Mistri's salary Rs. 40 per month	1	9
Other labour is the same as working with steam engine (Rs. 539+Rs. 72 expenditure on engine) .	18	11
Total .	31	8

The expenditure by working with a steam engine is Rs. 33-9 and with electricity comes to Rs. 31-8 per day which are almost similar figures. Thus the profit is only (Rs. 154-2+Rs. 140-5) Rs. 13-13 per day if the depreciation charges and interest on capital are not accounted. When the excise duty of Re. 1 per cwt. is paid on 29½ maunds of sugar which comes to about Rs. 21-10 the net loss is Rs. 7-13 per day.

It is therefore seen that it is better to discontinue running of the factory when there is a clear loss. Up to the year 1934, our sugar used to fetch a better price than the vacuum factory made sugar since there was a belief that bone is used in the clarification of juice but now it is sold at Re. 1 less than the factory sugar. Sweet sellers besides the gentry have also begun to consume vacuum pan sugar because in combination with either powdered gur known as "Shakkar" of the rate of Rs. 3 per maund or with low quality of sugar of the rate of Rs. 4 per maund, they have begun to prepare sweets and "Bura" for market sales. This gives them more profit since the price of sugar which arrives by this combination is Rs. 4 to Rs. 5 per maund. The gentry thinks more easy and sanitary to consume crystalline sugar. Thus our sugar is losing market and this sugar excise duty has proved a further blow to the industry.

The district authorities have been very strict in the assessment of the sugar excise duty even if the sugar is cured by a hand driven centrifugal in an entirely different building. When the enhanced duty was imposed this year, we stopped curing of sugar in the same premises where crushing is done and rab is manufactured. Centrifugals were removed to an entirely different building and turned to hand driven ones lest the duty may be levied on sugar cured by them disregarding the fact that the sugar will not be so white as centrifuged by power.

When the sugar excise officer paid a visit to the factory on 4th April, 1937, he was satisfied that the work of sugar making has been separated and process changed. On his later inspection of 7th May, 1937, he reports to the district authorities that "Although they are not manufacturing sugar within the premises of the factory but the premises still remain to be a factory" which does not clearly indicate that it comes under clause 2 (*a*) of Sugar Excise Act, 1934.

When we have to pay even on the sugar manufactured by hand labour it is better to close the factory than to continue, on which sufficient amount and energy have been spent.

If the Government want that this industry should develop on efficient lines and compete with the vacuum factory sugar, the sugar excise duty which is the main obstacle in its progress must be abolished because in this system of manufacture of sugar where crushing, rab making and curing are done in one premises, there is sufficient scope of expansion. In Khandsari industry, the rab is carried after it is manufactured in the village to the place of the Khandsari in which there are many losses in transit and a bit expensive due to the employment of more labour and use of earthen "Kalsis" which proves a waste. It is therefore hoped that the Government would pay special attention and see that the excise duty is removed.

Doolha Estate, Basti.

Reply to Questionnaire.

1. From cane.

12″ × 18″ crushing mill. 2 Sets Rohilkund bels. Bagasse used as fuel. Three centrifugals, 12″ × 18″.

2. Buy cane direct from tenants, no intermediaries or commission.

		As.		As.
3.	1933-34 . .	4	1935-36 . .	4
	1934-35 . .	4	1936-37 . .	3

5. (1) Juice—56 maunds.

(2) 19·64 maunds.

(3) 45·45 maunds.

6. Two.

	1933-34.	1934-35.	1935-36.	1936-37.
	Maunds.	Maunds.	Maunds.	Maunds.
1st Class .	1,031	1,161	1,798	1,206
2nd Class .	353	473	861	637
Total .	1,384	1,634	2,659	1,843

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	Item.	1933-34.	1934-35.	1935-36.	1936-37.	Total.
		Rs.	Rs.	Rs.	Rs.	Rs.
7.	Price of cane	6,595	8,597	13,227	7,450	35,869
	Wages	1,169	1,127	1,485	1,156	4,937
	Machinery	1,101	606	606	988	3,301
	Chemical	88	139	47	48	322
	General	40	138	477	226	881
	Office	16	23	2	5	46
	Building	...	...	35	27	62
	Oil	246	441	621	411	1,719
	Compensation	...	15	15	...	30
	Manager's salary	240	240	300	300	840
	Carting cane	...	...	205	...	205
	Bags	...	...	158	274	432
	Income-tax	...	...	40	95	135
	Total	9,255	11,326	17,218	10,980	48,779

8. Local sweet merchants in our own Estate Bazars (Halwais). **Khandsari sugar** could not stand Railway freight.

		1933-34.			1934-35.			1935-36.			1936-37.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
9.	1st Class	7	14	6	8	6	6	6	12	3	6	3	6
	2nd Class	6	6	0	6	12	9	5	3	6	5	3	6

10. Preferred to gur. By sweet merchants (halwais).

12. I do not think that there are any other khandsari factories in the District.

13. For the first two years the factory was exempted from excise duty. In the third year duty was imposed after the season had finished, the 4 annas paid to tenants was more than the factory could bear and a loss of Rs. 700 was incurred. There is again a loss of roughly Rs. 200 this year, but this is more due to breakdowns and unsatisfactory running and a clear verdict cannot be given whether the factory would pay it's way on the enhanced excise duty.

14. Uneducated mechanics have not sufficient engineering knowledge to deal with breakdowns, the profit does not justify employing higher paid ones.

Expense and delay in obtaining spare parts from Calcutta.

The number of men employed is excessive.

Without steam, the only method of drying the sugar is to tread it out which is unhygienic.

Financing the concern when it is incidental to running the Estate.

The above are the main difficulties, another difficulty for the future will be that the present price of 3 annas is insufficient to induce men to grow cane. The labour entailed watering it through the hot weather months, fencing the cane and guarding against grazing, earthing up and weeding is all work which calls for a good return. When the mill was erected there was no suspicion of excise tax in 1933, now excise tax and again increased excise tax have lowered the price that a khandsari mill can pay to an extent where it is unlikely the tenants will any further find benefit in growing cane.

MGIPC—L—15STB—20-7-38—150.

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